TROUBLES WITH TIMELY TRANSPOSITION: IDENTIFYING AND EXPLAINING NATIONAL ADOPTION OF EUROPEAN UNION LAW

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ABSTRACT

European Union (EU) member states are required to adopt EU directives into national law -- a process called transposition. In the past decade there has been increasing interest in examining transposition rates of EU directives into national law, with most scholars assuming that the member states fall short of their obligations and seeking explanations for the delays. But is there actually a transposition problem? If so, where is it located, and how can we explain it? This dissertation aims to answer these questions. First, I argue that the extant literature, in assuming a transposition problem exists, undercuts the important fact-finding process that determines whether and where transposition problems lie. To determine the extent and location of member state transposition problems I create a new database encompassing the entire population of EU directives to have been transposed between 2005-2008. Using logistic regression, I find that transposition is a problem, but suggest that reframing the discussion to look at sectoral variation provides more explanatory power than cross-country variation. Second, after finding the location and extent of transposition problems, I then conduct another logistic regression in an attempt to determine which factors may cause transposition delay. I suggest that varying transposition rates may be caused by delaying factors being

more heavily concentrated in some sectors and factors that tend to increase transposition timeliness being concentrated in others. Finally, I propose that constructivism may provide more insight into explaining transposition timeliness or delay than the more usual rationalist or institutionalist theories.

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CHAPTER I: INTRODUCTION

The European Union is an institution unlike any other. Debates about the *sui generis* nature of the Union aside, the member states of the EU have created an international organization with depth and breadth unparalleled in other contemporary international organizations. This alone would give rise to a large literature to understand how and why this has come about, how it is sustained, and how it changes. When one adds the fact that this union comprises the largest share of world GDP, it takes on another level of importance.

The Treaty on European Union (1993) sets forth in its opening clause that one of the Union's objectives is "to promote economic and social progress which is balanced and sustainable, in particular through the creation of an area without internal frontiers, through the strengthening of economic and social cohesion and through the establishment of economic and monetary union..." (Treaty on European Union, Article B). Yet even before establishing this goal, the Treaty acknowledges that this Treaty "marks a new stage in the process of creating an ever closer union among the peoples of Europe, in which decisions are taken as closely as possible to the citizen" (Treaty on European Union, Article A). On the face of it, Article A seems rather contradictory: it wants to create a closer union, but at the same time make decisions as much as possible at the national or even regional level. How can this be?

The European Union has developed an extensive *acquis communautaire*, which is the embodiment of all of the laws and regulations developed in the EU. There are four different kinds of laws that the EU may implement. Treaties are primary legislation and apply to all member states and all of the articles are binding upon ratification by the members. Regulations are directly applicable and are "binding in every respect and directly applicable in each member state" (Art. 288). Decisions are written by the European Court of Justice (ECJ) and are addressed to a specific person, state, or company and are binding only to the recipient of the decision. The fourth type of law is the Directive. Directives embody the emphasis of the EU on making decisions as closely as possible to the citizens. Directives are not directly applicable to the member states, but rather require each state to pass its own legislation to incorporate them into domestic law. The directive sets forth a goal to be achieved, but largely leaves it up to the member state how to achieve that goal. In this way, the EU recognizes that each individual member country has its own history and culture and these may require different approaches to reaching the same EU goal. Each state is allowed to express its individual needs and accommodate the diverse needs and wishes of its population while still meeting EU mandates.

Yet when a member country does not transpose an EU directive on time, it is a threat to the economic, political, and social integration of creating an integrated European Union. Late or incorrect transposition creates an uneven playing field, whereby citizens and businesses operating in different countries must play by different rules. Delays in

transposing directives are a direct threat to the expansion of the free market and European integration.

The connection between integration and transposition has created an increasing interest in examining transposition rates of EU directives into national law. In the last decade, there has been a generalized acceptance that there is a compliance problem which has led most current research to seek to explain why some countries comply better with transposition requirements than others, or to look for explanations of specific features of directives or national governments that result in better (or worse) transposition. However, to date there is no study that has looked to confirm whether there is a "there" there; that is, whether the differences found in transposition rates between countries or between or even within sectors are statistically significant. This dissertation aims to fill this gap in the transposition literature. I seek to determine where transposition problems exist, and then examine factors that may help or hinder timely transposition, and what may account for these differences from a theoretical standpoint.

This dissertation is organized around three puzzles. First, is there actually a transposition problem in the European Union? As I mention above, the assumption of a transposition problem is often the starting place for transposition studies. Yet no study to date has actually examined the transposition data to determine if there is a transposition problem. Without knowing what the state of transposition is, it is impossible to make comparisons. Most studies are interested in explaining why one country (or set of countries) has a better transposition rate than another. Some scholars have suggested the

level of misfit between the EU requirements and existing domestic policies can affect transposition rates. The more the EU policy fits with existing policies, the easier transposition will be and vice versa. Others suggest that the number of veto players within a country can affect transposition because the more players involved, the more points there are for a key player to block the legislation required. Yet others have suggested that there are varying "worlds of compliance" (Falkner, et al.). This hypothesis contends that some countries have more of a 'culture of compliance' than others, and those countries will transpose directives in a timely fashion no matter how many veto players exist or how much the directive contradicts existing domestic legislation. There are many other hypotheses as well, and all of them assume a difference in transposition rates that needs to be explained. Without first studying the transposition rates and determining if the differences between them are significant, current efforts may be attempting to explain a problem that either does not exist or is not particularly serious.

The second puzzle builds on the first -- if there are transposition problems, where are they located? The vast majority of the extant literature seeks to examine differences in transposition rates between countries. Intuitively, this makes sense since each country has its own history, political structure, and relationship with the EU, which provides a great many possible explanations for differences in their rates of adoption of EU law. But are national differences the only differences that can be examined? Despite many calls suggesting that policy sectors may vary in their transposition patterns, only one author to date (Haverland) has made a significant attempt to study sectoral differences. Based on

the results from the transposition analysis, I suggest that reframing the discussion to examine sectoral differences will provide new insights into transposition patterns.

The third puzzle makes an initial attempt to account for the transposition patterns found. I approach this puzzle in two ways. First, I conduct an independent variable analysis that is theoretically consonant with my findings that sectoral differences in transposition rates are more powerful than country differences. Rather than examining state-based variables, I chose four directive-based variables and hypothesize that these variables have a significant effect on timely transposition. I further hypothesize that the distribution of these variables varies from sector to sector, thus accounting for differing transposition rates. This begins to answer how we can account for the transposition patterns, but leaves the theoretical question unresolved. The second way I approach how we can account for differing transposition patterns is through the theories that are brought to bear on the subject.

Typically, research in this field is conducted deductively. A scholar usually takes either a rationalist approach or an institutionalist approach. From the rationalist side, the argument is that legislative actors prefer their own domestic agendas to those of the EU, and willfully disobey requirements to enact directives. If enforcement were more stringent, more countries would transpose directives in a timely fashion. The management approach does not see non-transposition as willful disobedience like the rationalists do, but rather claim that countries are often very willing to transpose directives, but lack the

capacity to do so. Having determined their theoretical bent, they they pick independent variables to prove (or disprove) their contentions.

Based on my findings, I suggest that neither of these explanations are particularly satisfying. The data show that sectoral differences are more powerful than country-based differences of transposition. Therefore, theories that are based on member state actors and attitudes alone may not provide a solid explanation for the findings. Instead, I suggest that a constructivist lens may provide a better explanation for sectoral variation. Constructivism provides a plausible platform for examining why some sectors transpose better than other, based on the socialization and learning processes developed as the EU has grown and expanded.

The next five chapters endeavor to shed light on these three puzzles. Chapter II will provide an overview of the state of transposition studies to date. Comparative politics is a subfield that prides itself on creating replicable studies to learn about and understand the differences between institutions, countries, laws, etc. However, transposition studies are rife with problems that prohibit replicability. I highlight problems of standardization, including data collection, data interpretation, and methods of analysis. This is where I first hypothesize that by always focusing on country differences, we may be limiting ourselves unnecessarily to certain methods of analysis, and consequently limiting ourselves to one set of country-specific independent variables from which to analyze the transposition deficit. I suggest that by adhering to straightforward, replicable methods of

data collection and analysis, we can learn more about transposition than has been developed to date.

Chapter III attends to addressing whether there is indeed a transposition problem in the EU. I show that existing transposition studies are fundamentally flawed because of the biases brought in due to case selection, data collection, and methodologies chosen. Because of the large amount of data available, most scholars choose a small sub-section of data to test their hypotheses. However, using a few countries in a specific field, or only analyzing a couple of directives over the entire EU introduces biases that limit the generalizability of the findings. To analyze the actual transposition problem, I created a database with the transposition records of 25 EU countries from 2005-2008. This is the entire population of data available for this time period.[1] Using Generalized Estimating Equations, Chi-square, and Logistic Regression, I conduct an analysis to determine exactly what the transposition rate is for all countries and sectors of EU directives, and where actual differences in transposition rates lie. I find that while country differences do exist, sectoral differences are more profound. Specifically, I find that Health & Consumers directives are transposed by virtually all member countries at a significantly higher rate than directives in other sectors. Conversely, Freedom, Justice, and Security (FJS) and Internal Market directives are transposed very poorly in most countries.

Chapter IV then goes on to explore some factors that may account for differences in transposition rates. Because I explore sectoral differences, I choose four independent

[1] I did not include Bulgaria or Romania because they joined the Union in 2007, and thus could not be analyzed for the entire time period.

variables that are not country-specific, but directive-specific. I hypothesize that each of these variables will have a specific effect on transposition timeliness. I further hypothesize that these variables may be unevenly distributed between the sectors, thus affecting sectoral transposition rates. This contention does not hold up well after conducting the logistic regressions, however. For Health & Consumers, the findings are fairly well supported, but much less so in Internal Market, and not at all for FJS.

Chapter V makes an initial attempt to understand transposition patterns from a theoretical standpoint. I find that the often-cited management and enforcement approaches do not hold up well against the data. Enforcement theories state that compliance is lacking because national rules and structures do not fit with international requirements, thereby making compliance too costly. However, similar patterns of transposition for different sectors across virtually all countries makes this claim implausible. Management theories state that compliance is lacking because countries are unable to comply with EU requirements. This does not explain the findings that some sectors are transposed well and others poorly within the same country.

Since this dissertation is structured inductively, I looked at the data to see if there were other theories that could plausibly fit the population of data gathered. I find that constructivism may provide a framework for understanding transposition. Constructivism is based on shared understandings of social facts. It may be that shared understandings of what is "appropriate" for the EU to legislate has a great deal to do with rates of transposition. In a field such as Health & Consumers, where there is little debate that this

is an area of authority for the EU and it is logical and appropriate for EU-wide standards, coupled with the independent variables that help transposition, foster a positive transposition rate in this area. On the other hand, FJS is an area that is still newly developing in the EU, and there are many debates over the appropriateness of the EU to legislate in this area. This may lead to poor transposition, since socialization, learning, and acceptance of EU authority in this area has not been consolidated. Further, amendments may be better transposed because, having transposed original directives on a subject, amendments to such are more easily accepted than new directives which delve into new areas of legislation. This chapter suggests that constructivism may be an appropriate lens through which to examine transposition, but does not test these claims. It is a speculative chapter; a suggestion for a starting point for future research.

The dissertation concludes in Chapter VI with a summary of the major findings and an assessment of the state of integration theory and Europeanization more broadly. Transposition can be seen as an important, concrete part of the puzzle of European integration. Integration suggests a merging of individual nations' policies (and perhaps even institutions, cultures, and ideologies, though that is a debate for another time). The purpose of directives is to do just that -- to forge an integrated Europe with harmonized policies to facilitate the flow of goods, people, and services. If countries are not fulfilling their responsibilities of directive transposition, they are creating or maintaining barriers that the EU project is trying to dismantle. This leads us to a better understanding of Europeanization in general, and understanding why some areas of "Europe" are easier to

forge than others. Institutions are sticky, but not always where we necessarily anticipate. A constructivist understanding of how attitudes, and therefore policy, change over time may provide insight into how institutions change and evolve, and where we can anticipate problems with evolving institutions in the future.

CHAPTER II: TRANSPOSITION STUDIES: ANALYSIS OF METHODS AND THEORIES

Introduction

The European Union provides comparativists with the potential to conduct studies that maximize both the "big picture" questions, as well as uphold strict methodological requirements. Transposition, in particular, provides an important area of study where both of these angles can be examined. From a normative, public policy standpoint, scholars may be interested in transposition because late or incorrect transposition creates an uneven playing field, whereby citizens and businesses operating in different countries must play by different rules. Delays in transposing directives are a direct threat to the expansion of the free market and European integration. Yet in addition to these normative implications, the study of EU-member state relations can reveal important insights into how supranational-national relations are formed, how they vary, and what factors affect them.

While international relations scholars are more interested in the role of how the supranational actor is formed, how it is sustained, how it changes, and what the effects of the nation state are on it, comparativists look at "the second image reversed" (Gourevitch). That is, what is the role of the supranational actor, in this case the EU, on its member states? As an international actor "(t)he EU has been around long enough to become thoroughly institutionalized, a permanent feature of the European

landscape capable of exerting causal effects as much as receiving them" (Anderson, p. 796).

As much as comparativists are interested in understanding critical intra-governmental relations, they also "insist that analysis requires explicit comparisons" (Lichbach & Zuckerman, p. 4). In order to draw appropriate and replicable conclusions, the methodology used should be impeccable. Studying the EU is as close to a controlled experiment as political scientists can get in the real world. As Toshkov notes, "the process of implementation of EU law in the member states resembles a natural quasi-experiment where the input (EU legislation) is processed synchronously by a number of politico-administration systems" (p. 8). As the EU has grown and acquired more areas of responsibility covering more countries, comparisons across time, country, and sector are able to be made. The tests that can be performed include whether transposition is a problem, what countries or sectors are particularly good or bad at transposing EU directives, and which factors may affect transposition rates.

To a greater or lesser degree, each of these questions has been examined in the field of transposition studies. However, employing a rigorous methodology to approach these questions has been lacking. Most studies have focused almost exclusively on identifying the independent variables that account for poor transposition. But without following a proper, rigorous method to asking questions and identifying how to work toward their answers, the findings from further study will likely be flawed. If we want to arrive at correct answers as to how the EU affects national-level policies, we need to

begin first and foremost with a proper methodology to ensure that the studies that follow will answer those questions.

In what follows, I will detail the current state of transposition studies. I will begin by examining the methodologies used to determine transposition delays and bring to light how these studies could be improved. In the next section, I will look at the questions typically asked in trying to determine transposition successes or delays. Specifically, I will show how the extant literature focuses almost exclusively on cross-national differences in transposition, and suggest that reframing the discussion to focus on cross-sectoral variation may prove more fruitful. Finally, I will discuss common practices in explaining transposition delay. Frequently, scholars take a "kitchen sink" approach to their independent variables -- throwing in anything that may affect transposition rates. Other times, since scholars are focused on explaining national variations, they primarily examine state-based factors to explain delay. I recommend we reframe the discussion to focus on sectors and suggest that examining directive-level variables will have more explanatory power.

Methodology -- Current Trends and Problems

Standardization

Transposition is the legal process by which European Union directives are turned into national laws in each of the member countries. Each member state has its own history, traditions, cultures, and government. It is because of this diversity and the strong

beliefs in the primacy of the nation state (as evidenced in part by the rejection of the European Constitution) that the EU is increasingly employing the use of directives (König and Luetgert, Mastenbroek 2003). Directives unify "legislation across Europe, but leave the different Member States some discretion in choosing means and instruments, hence mediating between unity and diversity" (Haverland, et al, p. 2). Directives stipulate a goal to be achieved, but leave it, as much as possible, up to the individual countries what specific laws must be enacted to achieve those goals.

All directives are issued with a specific transposition deadline by which national laws must be enacted that respond to the requirements of the directive. This deadline is important, for if one or more member countries do not transpose the directives by the deadline, businesses and citizens alike may have their rights diminished and the cost of doing business is likely to increase. Furthermore, ignoring EU-established deadlines undermines the authority of the Union.

Yet missing transposition deadlines is somewhat commonplace in the EU, and a large literature has developed to try to explain why. However, a current problem with transposition studies is the myriad approaches used to structure the available transposition data. Currently, there is no agreed upon method for standardizing the data used. This means that each researcher usually creates his or her own dataset and metrics for measuring transposition delay.

When determining whether a country has met its transposition requirements, scholars usually take one of two approaches. Either they look at whether a measure has

been transposed by the deadline, or they look to see whether infringement proceedings have been initiated against a country. Infringement proceedings are widely acknowledged to be an inaccurate measure for delay. "The main disadvantage of infringement data is that it [sic] is generated by strategic interactions between the Commission and the member states and is not a result of a process of perfect detection and pursuit of transgressions of EU law" (Toshkov, p. 12). Infringement proceedings begin only after a lengthy period of time during which investigations have already begun and have not been able to be resolved at an informal stage. Looking to Letters of Formal Notice or EJC decisions misses all the lower-level non-transposition problems, thereby examining only those where a resolution could not be made at an earlier stage. This skews non-transposition findings, indicating that they are relatively rarer than they actually are. Despite these problems, several studies employ this approach.[2]

Since infringement proceedings typically arise too late in the non-transposition process to serve as a realistic starting point for investigation, most scholars begin with the transposition records themselves. However, transposition is rather subjective. Scholars are at odds as to how to determine whether transposition has actually taken place. The first school of thought is to take the first transposition measure notified to the EU. Most directives require more than one law to be passed to ensure full compliance. The first measure toward fully enacting a law is sometimes used as a marker indicating timely transposition. Kaeding (2006) conducted a study on all transport directives implemented

[2] See Mbaye, Börzel, and Perkins and Neumayer.

between 1957-2004 across five member states. In his study he uses the first measure enacted "because the European Commission would also consider the first national legal instrument notified to be sufficient" (note 4, p. 22). He does not elaborate as to why he believes the first implementing measure would be considered sufficient by the Commission, nor does he provide evidence that this is how the Commission determined if timely transposition had occurred.

Other scholars have argued that a first measure may not be a good indication that transposition is complete. The first measure enacted may be small and insignificant, merely a gesture to show that transposition is proceeding. Steunenberg and Toshkov (2010) argue that "relying on the first notified measure would underestimate the transposition time (and the delay) since it only signifies the start of the transposition process" (p. 957). To that end, in their study they used the last measure enacted. This would ensure complete transposition of all measures required to implement the directive. However, waiting until every piece of needed legislation has been passed may be too much of an over-correction. Transposition may be essentially complete long before the last measure is codified into law. By waiting until all measures are enacted, we may be seeing more of a transposition problem than actually exists.

Since first measures and last measures are often too extreme, other scholars try to reach the appropriate balance and determine if transposition is conducted on time based on whether transposition is "essentially complete". Falkner, et al. (2005) provide an example of this in their work *Complying with Europe*. In this large analysis, Falkner, et

al. use an “essential measure” to determine compliance. They define essentially correct transposition as “an essentially successful fulfilment [sic] of most requirements... and, simultaneously, of the most central requirements of any Directive” (p. 269). They do note that this approach has a qualitative component where the authors must decide if the essential parts of the directive have been addressed.

It is perfectly acceptable to use any of those methods to determine transposition. Some directives may only require one law to transpose it completely, or the first law may be adequate to be essentially complete. Likewise it may be the last law enacted that bring some directives into full compliance. But the different benchmarks decided on unilaterally by the researchers make comparisons difficult.

More methodological problems crop up when looking at how to categorize the dependent variable. The above studies all take a dichotomous approach -- the directive is either transposed on time or it is not. Not content that this tells the whole story, some scholars attempt to create a categorical variable that reflects whether a directive was transposed on time, was slightly delayed, or severely delayed. Haverland and Romeijn defend their decision to use this characterization because “(t)he member states themselves agreed at the Barcelona European Council of March 2002 on ‘zero tolerance’ for directives whose transposition is 2 years or more overdue... [They] therefore decided to split the category of delay into ‘more modest’ and ‘more serious’ delay, using the dividing date of two years” (p. 764-5).

Mastenbroek (2003) takes yet a different approach where her dependent variable is no longer a direct measure of transposition, but rather the hazard rate, which corresponds to "the instantaneous probability of a directive being transposed in a specific week, given that the directive has 'survived' until that time" (p. 380). This allows her to focus on the *timeliness* of transposition, examining the variables that affect transposition given an ever-looming deadline. Again, these are all legitimate ways of categorizing the dependent variable. But such different measures make comparisons between studies problematic.

A further problem that affects nearly all transposition studies, regardless of the methodology they employ, is that EU data is potentially unreliable (Hartlapp and Falkner, pp. 288-289):

> The completeness of transposition is largely unknown and the correctness of transposition is completely unknown. Using these notification data to assess compliance cannot account for member state manipulation either- be it strategic or unintended. It is thus obvious that Commission notification data have severe shortcomings even when 'only' to depict the first stage of compliance with EU law, i.e. transposition into domestic norms.

Because of the suspect nature of EU-provided data, most scholars start with this data but look for verification and supplementation from other sources. Berglund et al. supplemented CELEX data with data obtained from Commission reports and individual member states. Others, including Mastenbroek (2003), Perkins and Neumayer, and

Steunenberg and Kaeding don't use EU-provided data at all, rather relying on data collected directly from states or from third-party organizations.

So what do we make out of all of the information about the ways in which transposition has been measured? We can see that because of the many different ways to measure and compile the data, we limit our ability to create replicable results, let alone do comparisons across time, country, or sector. Each method that researchers have used to date may be valid. Each has presented sensible logic for choosing their methods the way they did. However, without any sort of standardization, each study is completely individualized and non-transportable.

To address this first batch of methodological problems I suggest a very simple solution. Use EU-provided data. First, EU-provided data probably is not as much of a problem as others have stated. While EU-provided data used to be fairly unreliable, this is not a factor today. Kaeding (2006) found that 80% of the data in the CELEX database was coincidental with that found at the national ministries. While that leaves 20% unaccounted for he also found there was no systematic bias in the missing information. For confirmation purposes, his data went back to the very first directive issued in the transport *acquis*. He found "(t)here was no biased lack of information worth mentioning" (p. 233). Second, it is the lack of standardization on how to interpret and supplement that data that causes comparative problems. EU-provided data has improved greatly in the last few years. Beginning May 1, 2004, a new database was set up that provides an electronic means for countries to notify the EU of the national implementing

measures used to transpose EU directives into national law. Before this time, the method of notifying the EU was more unclear and ad hoc. Some countries failed to report in a timely manner, some may have been unsure of the necessity of reporting back to the EU if they had existing laws on their books that met the demands of a new directive. With a new electronic reporting mechanism, and clear guidelines that all measures, whether existing or newly enacted, must be reported, reporting has been much more transparent.

Furthermore, there is no subjective determination to be made by each individual researcher as to whether a directive has been adequately transposed. As König and Luetgert once stated, "although we have a record of national transposition measures applicable to these directives, there is no official indication for the adequate completion of the transposition process" (p. 169). This is no longer the case. The transposition database is examined internally every two months to ensure compliance by the member states. The EU then compiles Annual Reports broken down by each directive that was to have been transposed that year and whether or not it was. It also provides reports on whether a letter was sent because of suspected infringement. However, even with a complete database, there is no assurance that non-notification of transposition would actually trigger a letter in every case. That is subject to the EU's whims and desires and many factors may play into whether a letter of infringement was actually sent. However, the Annual Report is just a summary database -- what was to have been transposed and what actually was or was not transposed with no stigma of infringements attached. Using this database, as I do in this work, provides a clear, unbiased list of what the EU deems

has been adequately transposed to meet the requirements of the directive and what has not. With no subjective attachments, and no extra information gleaned (where able) from other sources, this is an up-to-date and easily replicable database from which to conduct research.

Statistical Significance

A second methodological problem that confronts transposition studies is that none of the studies on transposition delay looks to see if there is a statistically significant difference in the variation they are seeking to explain. This is an even bigger methodological problem than those noted above. As Mastenbroek (2005) notes, "(s)o far, the Commission's assertion of the existence of an implementation deficit has been accepted rather uncritically as a starting point for research. However, we are still more or less in the dark about the deficit's actual size. To what extent does European integration suffer from a 'pathology of non-compliance'?" (p.1114).

There are many studies that do not employ a large-n analysis, preferring to engage in case studies. Yet the sheer volume of information available through the European Union and the thousands of directives that have been enacted over the decades provide a large testing ground for large-n studies, which allow us to make not only comparisons but causal inferences.

In one of the first large-n studies, Mbaye began with the premise that the "number of infringements involving each member state varies greatly and understanding the

reasons behind the variation is paramount to addressing the issue" (p. 260). As was often the case in early transposition studies, she then looked at numbers of infringements as counted by referrals to the European Court of Justice. Mbaye counted the number of cases referred to the EJC each year by country, and her dependent variable was "the number of times a state does not implement EU law" (p. 266). Therefore, her dependent variable is a straight count number. Using a count number for the dependent variable, and many possible reasons for delay as the independent variables, allows for testing those independent variables but does not first discern whether there is any significant difference in the numbers provided on the dependent variable. That is, given X number of infringements in one year, and Y number in another year, is the difference between X and Y statistically significant? If not, she may be examining a non-problem. Unfortunately, the straight counts Mbaye uses in her dataset are not available. She does provide a frequency distribution which shows the number of cases per country in a given year, and the values range from 0 (approximately 56 cases) to 20 (approximately 1), with most being grouped between 0 and 5. Is the difference between 0 cases and 5 cases statistically significant? We don't know, and therefore do not know what the explanatory power is of her independent variables.

Mbaye's study was large n, focused on all directives across all countries, but it is generally accepted that studying infringements by looking at ECJ referrals offers too strict of a standard and misses many instances of non-transposition. Most later studies have switched to looking at non-transposition rates, rather than infringement referral

rates. One of the first to move away from infringement data was Mastenbroek (2003). Her database was based on non-transposition for all directives from 1995-1998 in the Netherlands. In this study she follows what is now a typical path for determining which variable may account for transposition delay. She finds that nearly 60% of the directives in Netherlands are transposed late, and identifies a few key reasons for the delay. This study has one primary missing component, however. She does not distinguish between the different sectors the directives apply to. She finds an overall rate of non-transposition of 60%, but we do not know if that is evenly spread across all areas or if one or two areas account for most of the delays and all others are relatively on time. Her explanatory variables may have different effects in different areas. This is not something she examines and could significantly affect her findings.

Mastenbroek provided a good start to using transposition data, however her results are limited, not only for the methodological problem noted above, but also for having used state-provided data (rather than EU-data) that was limited to one country. Kaeding (2006a) improves upon some of these problems by examining all directives in the transportation *acquis* from 1957-2004 for Germany, Greece, the UK, Spain, and the Netherlands. His dataset therefore is larger, encompassing more countries for a longer time period. In his study he finds that 61% of the transportation directives were transposed late. He goes on to show that Spain and Greece differ significantly from the other three countries in his study. In doing these independent sample t-tests, he shows that there is something there to explain and goes on to test many different variables to see

what their affect is on transposition. This is a significant improvement over previous studies, yet it still leaves something out. In only testing transportation directives, we don't know how that compares with any of the other sectors covered by the EU. Is transportation similar in its transposition proceedings as energy or agriculture? Focusing only on one sector leaves out a necessary comparison that puts transposition rates into perspective. Likewise, having a comparison among five countries is better than a single country case-study, but it is still testing just a minority of the countries in the EU.

While Kaeding made another important step forward by expanding his study, it was limited in scope by looking only at one sector in five countries. To date, the only dataset that looks at all 27 member countries is Steunenberg and Toshkov. Their study is focused specifically on four directives in four different sectors that are likely to cause problems for timely transposition. They state outright that their study is not intended for generalizability, but rather to conduct a case study on four cases to determine whether certain explanations, specifically discretion and legal fit, are strong indicators for transposition delay. So while theirs is the only study to date that uses all member countries, thus allowing the possibility of a true large scale cross-country analysis, it is ultimately limited by the narrow scope of the rest of the project.

All in all we find that current research begins with a presupposition that transposition delays are a problem and seeks to identify the reasons for delay. Myriad studies have developed hypotheses to explain these delays, but none has taken the step back to analyze overall transposition rates in the EU.

Focus of Study: Country Studies and Their Limitations

Because member states are required to transpose EU directives, and reports are generated signaling which countries are transposing well or poorly, it is natural that the focus tends to be on why some states are better at transposing directives than others. Virtually all studies on transposition focus on country transposition rates. Tanja Börzel et al. (2007), in seeking to understand differential compliance, ask, "Why is it, for example, that EU-skeptic Great Britain, Sweden and Denmark belong to the compliance leaders while more EU-friendly Italy, France and Greece have equally as bad compliance records as federal Belgium and regionalized Italy?" (p. 2). Gange and van Warden ask if all "Member-States have to transform the same input in more or less similar output... (w)ill the throughput differ" (p. 3)? And König and Luetgert wonder what factors "may explain whether member states comply with the deadline or not" (p. 164).

Most authors, like those above, have focused on the old 15-member states of western Europe, or a small subset of those countries. Another set of authors, however, have focused specifically on the new members of central and eastern Europe. The CEE states had to meet very strict conditional requirements for joining the European Union, which included transposing a large quantity of the *acquis* prior to their acceptance into the EU. The conventional wisdom was that these states would meet those transposition requirements in order to gain entrance to the EU, but that after accession, transposition would lag behind. A set of authors examined these countries to see if post-accession

compliance was worse than pre-accession. What they found was that "far from constituting an 'eastern problem', compliance in the new members has been surprisingly good" (Sedelmeier, 2008, p. 807). Likewise Schimmelfennig and Trauner ask "(have the new member states successfully adopted the acquis communautaire? Do they comply well with EU legislation?" (p. 1). The focus is very much on what the countries' transposition rates are, and how to account for divergence between them.

There are also some studies that focus on a sector of particular interest. Where country studies frequently aim to identify the differences in transposition rates between different countries, sector studies rarely aim to enlighten the reader as to the differences between sectors, but rather use a sector as a proving ground for the theory they are testing and compare country performances within that sector. For instance, Sedelmeier (2009) examines transposition rates in several CEE countries by focusing specifically on gender equality legislation. He is not interested in gender equality legislation per se, but rather chooses those directives because they are deemed to be particularly important and serve to narrow the focus of the study to a manageable level. Kaeding (2006) studies the transposition of transportation legislation. He picks transportation as a proxy for internal market legislation, which if transposed late "causes legal uncertainty, undermines the confidence of citizens and businesses in the exercise of their rights and undermines the day-to-day working of the Internal Market (p. 230). He is not interested in transportation in and of itself, but rather uses this as a way to reduce the scope of his study to answer

other questions about transposition, specifically focusing on differences in transposition rates between countries.

Despite the oft-repeated assertion that policy area may play an important role in transposition rates, few studies have been conducted that examine if there are sector-specific differences. Lampinen and Uusikylä noted in 1998 that there were differences in transposition rates between directives that had to do with the internal market and all other directives. Berglund et al. found that there were differences in transposition rates between the policy fields of utilities and food quality regulation. Yet despite their stated belief that there are differences in policy sectors, they each went on and examined country-specific explanations for transposition delay rather than looking to see if there were sector-specific reasons for the delay.

Haverland et al. are the first to specifically examine whether there are "substantial differences between sectors with regard to the speed with which European directives are transposed" (p. 3). In their study they postulate that different characteristics of directives (such as new versus amending directives) relate to timely or delayed transposition and that perhaps directives with those different features are unevenly distributed between the sectors. While Haverland et al. take a good first step toward examining differences between sectors, the scale of their investigation is limited. They examine only four sectors (food, social policy, transport, and utilities) in just five member states.

To date there is no study that fully examines whether specific factors affecting different sectors relate to transposition timeliness or delay. A concentrated focus on

member states and differences between them is of course interesting and may provide insights to transposition problems, but it is not the only way to look at EU transposition. In fact, the EU itself is not set up in such a fashion as to deal specifically with country issues. That is, it does not have a directorate on Spain, or a directorate on Germany. Rather, it has directorates that focus on sectors, such as Agriculture, Internal Market, and Employment.

Indeed, several studies have shown that national parliaments often have little to do with day-to-day transposition decisions, minimizing the effects of differences in national governments that are often thought to affect differences in national transposition rates. Summarizing several studies, Steunenberg shows that as few as 13% of directives in Netherlands "were transposed by statutory law" (p. 24) and less than 20% in Spain. Other countries also found their national parliaments to be similarly disengaged from transposition requirements. Because the parliament is not involved in most legislation, Steunenberg finds that the "context of transposition is therefore predominantly *policy-specific* rather than *country-specific* as presumed in most of the current work" (p. 24, emphasis in original). Likewise, several authors have suggested that policy-sectors matter, including Haverland as sited above. Others include Toshkov who states that "(t)he sectoral differences in transposition rates are important" (Toshkov 2008c, p. 398), and Treib who states that "we know comparatively little about the cross-sectoral variance of transposition patterns within member states. For example, it seems quite plausible

theoretically that transposition is different in rather technical policy areas than in highly politicised ones" (p. 17).

Given that existing studies examining country-differences give us conflicting results, combined with the fact that legislatures often have little to do with transposition and the often-stated but woefully under-researched belief that sectors matter, I seek to show that sectors can provide a different, and perhaps more enlightening, way of examining the transposition problem in the EU.

Independent variables: Which Level of Analysis is Appropriate?

Current research most often follows the premise that "classifying countries and investigating them according to their shared theoretically relevant characteristics might bring forward macro-political factors that are more specifically associated with the transposition performance" (Haverland and Romeijn, p. 771-772). Here I will detail some of the most often examined state-based variables used to explain transposition performance.

One variable suggested as a contributing factor to delayed transposition is the presence of federalism/regionalism. Haverland and Romeijn suggest that "some member states are dependent on relatively autonomous sub-national entities... (requiring) the need to coordinate implementation efforts among relatively autonomous actors" (p. 773) and that this is a cause for transposition delay. König and Luetgert predict in their study that federalism will increase transposition delays compared to unitary systems. Indeed their

testing finds that federalism does lead to statistically significant delays. Yet not all studies have found this to be the case. Despite their prediction that federalism would lead to delays, Haverland and Romeijn find that it is not a significant factor in explaining transposition delays.

Another state-based factor predicted to increase transposition time is administrative efficiency. Mbaye operationalizes this by using a scale that "tracks the professionalism of the bureaucracy... (assuming) that the more professional a civil service is, the more efficient it will be" (p. 270). She does find that administrative efficiency is a good indicator of timely transposition. Perkins and Neumayer also find that bureaucratic quality is positively correlated with timely transposition, but Steunenberg and Toshkov find that government effectiveness is actually negatively associated with good transposition rates.

The strength and number of veto players is also often anticipated to increase transposition time. This is a difficult variable to quantify, especially over longer periods of time, because "its values change with the number of parties in government, type of Parliamentary procedure, ... (and) combines institutional and preference information" (Toshkov, p. 26). While veto players is usually a more stable variable in that most studies agree that an increasing number of veto players leads to transposition delay, it is still not entirely clear cut. Most researchers found that an increasing number of veto players has a significant impact on transposition delay. However, Steunenberg and Kaeding found in their study of maritime directives that their veto player index "has an

unexpected positive (speeding up) effect" (p. 448). They found it was a significant speeding up effect when legislation had been pending for 62 weeks, but finally had a negative effect only after more than 2 years of delay.

One surprising conclusion is the result of studying the public level of support for the EU. Theory suggests that the more the public is supportive of their country's involvement in the EU, the more likely there will be timely transposition. However, in most cases cases a significantly negative effect is found (Mbaye, Bergman). No good explanation for this unexpected finding has been revealed in the literature.

A large section of literature is taken up with exploring the goodness of fit argument. In this line of inquiry, "the misfit argument was to reduce the complexity of analysing implementation processes by exploring how far the "institutional filter" (Knill and Lenschow, p. 610) provided by the compatibility between EU demands and domestic policy traditions *alone* could explain the implementation of particular pieces of EU legislation." (Treib, p. 8). It was an attempt at parsimony in a field where explanations for transposition delay were multiplying.

The misfit theory suggests that national policies are relatively "sticky". That is, if there is a high "degree of institutional incompatibility between national structures and practices and European Union requirements... implementation of European requirements is likely to be ineffective, since European policies require fundamental changes of core structures and practices of national institutions" (Haverland, p. 84). Change is difficult. On the other hand, if the EU requirements demand few if any changes by a member state,

implementation should be relatively smooth. Many authors approached transposition studies in this way,[3] though ultimately the results were mixed.

According to Toshkov, more than "263 relationships between potential explanatory factors and some aspect of compliance have been tested" in just the subgroup of articles that he examined for his survey paper (p. 24). A full list and analysis of each is not necessary for this review. The literature confirms that analyzing state-based variables to explain state differences in transposition have been contradictory to say the least. There are no overwhelming agreements on the causes for the differences in transposition rates between the member states. This could be due partially because of the methodological problems I noted above. Without standardization and testing only sub-populations we are likely to get different results.

If, as I suggest, state variation may not be the most enlightening way to examine transposition deficits, then examining state-level variables is not theoretically consonant with my contention that looking at sector variance is in order. We need to look for variables that do have a direct effect on sectors. Haverland et al. make an excellent case for looking at directive-level variables as a means to understand sectoral differences. There may be factors that vary by directive that show up in distinct clusters in different sectors.

In their study, Haverland et al. explore whether sectoral variation in transposition rates occurs by examining five member states in four policy areas. They examined four

[3] See for example, Knill and Lenschow, Börzel 2000.

variables to explain transposition delays, including whether it was a Council or Commission directive, whether it was a new or amending directive, whether the directives require parliamentary legislation or can be transposed by ministerial decree, and whether more than one ministry must be involved in the transposition process. For each variable their analysis seeks to understand "whether these factors do indeed retard transposition, and subsequently whether such retarding factors are more prevalent in some sectors than in others" (p. 11).

They find that significant cross-sectoral variation exists, and that this can partially be explained by "an unequal distribution over sectors of variables that have been identified in earlier studies to affect duration and delay" (p. 22). Indeed they find that sectors with higher percentages of Council directives, new directives, and legislation-requiring directives are more frequently delayed than their counterparts.

However, these findings must be tempered a bit. First, they only examined five countries in four policy areas. The methodological problems noted above suggest that this will likely result in biased conclusions. There is little evidence from the existing literature that the transposition rates of UK, Netherlands, Spain, Greece, and Germany are representative of the EU as a whole. Likewise, without further examination, there is no telling whether the four policy areas they examined (food, social policy, transport, and utilities) are significantly different from each other or from other sectors in the EU. Comparing those four sectors may be comparing four relatively average-transposing sectors, thus gaining us no real new knowledge.

Secondly, some of the variables they use are not particularly useful for what they are trying to measure. They claim that whether directives are issued by the Council (or Council and Parliament together) or by the Commission may be a factor. The reason behind this is that Council directives "generally concern major policy issues. *Commission directives* tend to be of a more 'technical' character" (p. 12, italics in original) and are therefore not as controversial as Council directives. However, a better way of examining this would be to look at the nature of the directive itself, rather than use Council versus Commission as a proxy. Surely they do not wish to claim that if a technical directive were issued by the Council that it would meet more opposition than if it were issued by the Commission, or that a complex directive if issued by the Commission would be easier for countries to transpose than if issued by the Council? The real issue is looking at the nature and complexity of the directive itself. One such way this has been done in the past was in Kaeding's (2006) study where he accounted for the number of recitals in a directive. Recitals "are meant to state the purpose of the directive and to describe each of the main provisions of the directive" (p. 236). He found in his data that the number of recitals varied from 1-50 with a mean of 11.38. If a directive had above the mean, it was considered to be complex. This is a better way of getting at the complexity of a directive rather than using a Council/Commission proxy.

Determining whether directives require parliamentary involvement or may be transposed by ministerial decree would likely change from country to country- that is not an issue that is decided by the text of the directive. Using that as a measure tells you more

about any individual country's legislative procedures than it does about what is required in the directive. Likewise, determining whether more than one ministry must be involved in the transposition process is also a function of state rules and decisions, not a function of the directive itself. These two measures are not particularly well-suited at getting at differences in transposition rates between sector. However, whether a directive is new or amends an older directive is an excellent choice, as that is determined at the EU-level and is directive specific and is often used as an independent variable in other studies.

Theoretical Foundations

While it may seem that the explanatory factors taken up in the literature constitute a random, haphazard assortment of variables, this is actually not the case. Most studies situate themselves very well within existing theoretical literature. Scholars usually frame their studies around one of two competing perspectives: the management approach or the enforcement approach. Those who believe in the strength of the enforcement approach "characteristically stress a coercive strategy of monitoring and sanctions, (while) management theorists embrace a problem-solving approach based on capacity building, rule interpretation, and transparency" (Tallberg, p. 609). These two competing theories underlie the differences between rational choice and institutionalism. The basic assumption under institutionalism is that "actors are embedded in sets of institutions that structure their social action and behavioural choices" (Berglund, p. 699). Compliance, or lack thereof, is not a matter of willful disobedience, but rather actors are lacking in

capacity to fulfill requirements. Some of the factors that are frequently encompassed in the works of those who identify with the management approach are administrative efficiency (Mbaye 2001, Kaeding 2006), corporatism (Mbaye 2001, Kaeding 2006) federalism (König and Luetgert 2008), time given to transpose, and veto players (Mbaye 2001, Treutlein 2007).

Rational choice theorists under the enforcement approach, on the other hand, see the actors as choosing "to defect when confronted with an incentive structure in which the benefits of shirking exceed the costs of detection" (Tallberg, p. 611). In this case, it is not a lack of capacity that causes states to not transpose legislation, but because they perceive the costs as too high compared to the benefits and in light of any possible sanctions for non-compliance. Some of the factors that are usually associated with the enforcement approach are time to transpose, veto players, bargaining power (Börzel et al. 2007), ability to bear the cost of sanctions (Börzel et al. 2003, Börzel et al. 2007), misfit of the legislation with existing state legislation (Falkner et al., 2004, Knill 1998), and support for the EU (Mbaye 2001, Lampinen and Uusikylä 1998).

Note that there are some factors that show up both as variables used to support the cause of management approach and enforcement approach schools of thought. Veto players, depending on the particular theoretical approach taken by researcher, can either lead to a delay because of the sheer number of people that have to weigh in on the decision to transpose legislation, therefore making it a more cumbersome process, or it

can lead to a delay because the potential ideological differences between the players require consensus that is difficult to gain in confrontational politics.

A few authors endeavor to combine the best in both management and enforcement approaches. Tallberg advocates the combining of both approaches to successfully describe the process as it actually happens in the EU. He states that "monitoring, sanctions, capacity building, rule interpretation, and social pressure coexist as a means for making states comply... (T)hese instruments are mutually reinforcing, demonstrating the merits of combining coercive and problem-solving strategies" (p. 614). Likewise, Börzel et al. (2007) examine both the management and enforcement approaches and find that "the combined model of the enforcement and the management approach has the highest explanatory power. The best compliers are member states that have ample administrative capacity and lack the power to resist compliance. Conversely, the countries with the worst compliance records are those with limited capacity but enough power to resist the Commission's enforcement efforts" (p. 1).

Because most of the work in this field has been focused on examining cross-country differences in transposition, the management and enforcement theories have been presented primarily in light of country analyses. That is, management and enforcement approaches have focused often on the factors that vary from country to country. Even those that do not vary (much) from country to country, like time to transpose a directive, have been fit into a country study approach by using that variable as an explanation for transposition timeliness (or delay) *within that country*. For any particular directive, the

time to transpose is not usually different between countries, so time to transpose would tell us little about any variation.

I suggest that by looking at these variables on a sectoral basis, we will gain important insights into the strengths and weaknesses of management and enforcement theories. The variables I intend to analyze fit firmly in the management school approach. I believe these are most suited toward sectoral analysis. However, we may learn something about the applicability of the enforcement approach if the management approach is a weak explanation for any given sector. The management and enforcement approaches need not apply only to country studies, as is typically found in the literature. Applying them to a sectoral analysis will help to confirm the strength of the approach, or suggest certain limitations, that have been overlooked by country-centered studies. Likewise, other theories may come to light that have more explanatory power after the analyses have been conducted.

Much of the "analysis in comparative politics is guided by the expectations, assumptions, methods, and principles" of rationalist and institutionalist schools of thought (Lichbach and Zuckerman, p. 9). Yet if different studies, with different flaws and biases, reach different conclusions about the strength of either explanatory model, it seems the appropriate step to take would be to examine all appropriate explanatory factors and then see if one or the other school of thought has stronger explanatory power. In all likelihood, the reason both schools compete with each other is because they each have something to offer. I do not mean to suggest that we ignore the Kantian warning that

good research without good theory is blind. Good theory is necessary for asking the appropriate questions. Perhaps this line of questioning, at this point in the research, is better suited to inductive approaches rather than deductive. Since the theories from a deductive point of view lead us to differing conclusions, perhaps using a more comprehensive data set, with a theoretically solid research design, can lead us to ask and test appropriate questions that will lead us inductively to conclusions about theory.

All in all, the literature in this field has made great strides. From its beginning research agenda where broad inquiries were made and not well grounded in theory, to today's research designs that are deeply embedded in current theoretical debates, transposition studies have made a lot of progress. But given the methodological problems surrounding how data is gathered and interpreted, the limited scope of examining country differences, and the limitations imposed on independent variable analysis because of scope and methodological problems, it is time to reframe the discussion. This dissertation aims to do just that.

CHAPTER III: IS THERE A 'THERE' THERE? STATISTICAL ANALYSIS OF TRANSPOSITION RATES

Introduction

Measuring and interpreting EU transposition rates is a tricky business. There are continuously conflicting reports as to how large the transposition deficit actually is. Looking at the European Union's Secretariat General's "Progress in notification of national measures implementing all adopted directives", released November 24, 2009, the EU member states have an overall transposition average of 99.25%, ranging from a low of 98.7% (Greece) to 99.55% (Germany). Likewise, Tanja Börzel (2001) found in her analysis "that the level of non-compliance is rather modest." At the same time, other authors argue that non-transposition is a huge problem. Mastenbroek (2003) finds that nearly 60% of EU directives have not been transposed on time in Netherlands, while transposition deficits are also confirmed by Lampinen and Uusikylä (1998) and König, Luetgert, and Mader. Which analysis is correct?

The easy answer is that both are correct. If one looks at European Union transposition overall, the transposition rate is very high -- close to 100%. However, this covers thousands of directives issued over the course of decades. It stands to reason that directives issued in the 1970s or 1980s would be transposed by now. It says nothing about whether they were transposed on time or late back when transposition was mandated. Likewise, looking at transposition over a much shorter time period and/or within prescribed sectors or countries will likely show that timely transposition is a problem.

However, picking and choosing which time periods, sectors, or countries could create selection bias problems that actually over-estimate the transposition problem.

If both methods are correct, how can we reconcile the discrepancy? Obviously, examining real-time transposition will give a more sufficient answer as to the depth of the transposition problem. Few would argue that looking at overall transposition rates over the decades tells us anything substantial about actual transposition -- the data is weighed too heavily on old directives that have had years, if not decades, to be transposed. Examining the transposition of directives with regard to each directive's deadline is the better way to investigate how much of a problem late transposition actually is.

Fortunately, most studies approach the data in this manner. Yet this is where the good news ends. Statistical methods of examining the data rightfully hold a significant place in transposition studies. As Toshkov (2010) notes, "the application of statistical methods fits and benefits the study of domestic adaptation to EU law, but in fact different rationales can be proposed, each based on different assumptions" (p. 9).

Statistical studies can be used to make either descriptive inferences, or causal inferences. "Measuring compliance performance is never perfect, so statistics can address what is essentially a measurement problem. Collecting data on a large number of cases improves our knowledge of the tendencies and patterns of compliance because measurement errors cancel out in the aggregate" (Toshkov 2010, p. 9). Meanwhile, using inferential statistics can advance causal claims. In this vein, rather than just describing the

depth of the transposition problem, researchers look to extend causal explanations for the transposition problem.

Causal inferences are extremely important for advancing our knowledge about why transposition occurs on time or is delayed in different situations. Most of the transposition research currently falls under this rubric. However, initiating inferential research without first doing descriptive research can lead to investigating problems that may not actually be problems. That is, in order to proffer causal explanations for why transposition is delayed in some instances but not others, one must first necessarily establish that there is a difference to be examined; that there is a "there" there. As Mastenbroek (2005) notes, "nobody knows the size of the alleged compliance deficit. This is disturbing because we may be investigating a non-problem" (p. 1115). In order to describe why transposition occurs in Case A but not in Case B, one must first establish that there is a statistically significant difference between the results of A and B. Establishing this baseline has been missing in virtually all quantitative studies on transposition.

This is a gap in the literature this dissertation aims to fill. In what follows, I will present and justify the data I use to show where there are statistically significant differences in transposition rates. It is in these areas where causal inferences may then be drawn in further research.

Defining the Terms

The Population

The population of directives in the EU covers many tens of thousands of directives, most of which are decades old and whose deadline for transposition has long passed. Examining the overall transposition rate, as indicated in overall EU statistics at near 100%, is not empirically useful. A more useful proposition would be to examine each directive and determine whether in each country it was transposed on time or not. The prohibitive time and expense of doing this notwithstanding, there are methodological issues to conducting such an all-encompassing analysis. First, different areas of influence for the EU came into existence at different times. Examining the transposition rate when European cooperation was limited to steel and coal and comparing that to today, with the EU's emphasis on the common market in goods, capital, people and services, is like examining apples and oranges. They both may be fruit, but that is where the likeness ends.

Second, over the years, a growing number of countries have been members of the EU. Beginning with just a handful of countries at the beginning to 27 member countries today, the EU has looked very different as it has grown over the years. Third, the different treaties that have governed the EU have not only had effect over different sectors of the economy, but also different voting rules. Transposition rates may have been very different when virtually all decisions were made by unanimity versus today when few sectors require it. For these reasons, selecting the entire corpus of the *acquis*

communautaire would be more of a distraction than a help to illuminate important transposition patterns.

To overcome these methodological and practical hurdles, it is more useful to use a subset of the population. Studies today can vary widely in the subset that they use, and selecting the sample is most often a matter of scholarly interest. Researchers most often are interested in a certain country, subset of countries, or policy area. The data selected are prescribed by their research interests. Yet when selecting any subset, there are potential biases brought in. Different forms of sampling bias are unfortunately rampant in transposition studies. Virtually all studies[4] focus on a few policy sectors or a few countries. While it is possible to get important information from these narrower studies, it would be a mistake to assume that factors that help or hinder transposition in the transport sector in the Netherlands necessarily tells us anything about transposition in energy in Hungary.

Toshkov (2010) makes the distinction that "most of the studies focus on all directives within a policy sector or a country and do not filter important from unimportant EU legislation" (p. 18). Yet rather than seeing that as a negative as Toshkov does, this should be a positive. There is likely a difference in the qualitative importance of some legislation over others (as he likes to point out -- laws on rear-view mirrors of tractors compared with laws on anti-discrimination). But there is an underlying problem with this;

[4] Only Steunenberg and Toshkov (2009) examine all 27 EU member countries, but their results are limited by the fact that they look only at 4 directives, choosing those that they deemed "important" and that they estimated would have a high likelihood of transposition delay. Their results are not generalizable to all EU directives. There are a few studies that examine all 15 old member states, but given that the large 'eastern expansion' occurred in 2004, those data are very limited.

trying to assign a relative value of importance and studying only "important" legislation would certainly lead to selection bias. If some directives are left out of the analysis because they are deemed "unimportant", that will certainly skew the data and the results. A better approach would be conducting a causal study after the initial analysis to determine whether "important" versus "unimportant" or "easy" versus "difficult" are factors that affect transposition, but limiting the initial analysis to subjectively determined "important" directives would be a mistake.

Another potential bias in most studies is limiting the time frame. Suggesting that what happens during one time period tells us about what happens in another would not be supported without substantiation. However, in the case of transposition studies, limiting the time period is actually of crucial importance. As mentioned above, different member countries, different policy areas, and different voting regimes have reigned throughout the history of the EU. Trying to compare transposition rates across time without accounting for these differences would not present accurate results. However, limiting the time-frame to minimize these different effects on transposition rates actually helps illuminate factors affecting transposition.

For my analysis, I aim to analyze a broad spectrum of data, minimizing potential bias, while limiting the data to be useful across countries and sectors. Rather than examining one or a few countries, or one or a few sectors, I present data from all 25 member states in all policy sectors from 2005-2008. (Bulgaria and Romania became EU members in 2007, but since data on their transposition rates would be limited to the

second half of the time frame, I have eliminated them altogether to focus on the same 25 countries for all 4 years). These four years across 25 member states required 9976 individual transpositions. Most directives applied to all member states, but there were also many directives that applied only to one or a few states. In choosing these parameters for this study, I hope to limit biases while providing generalizable results. Examining all of the directives in all sectors across all countries will reduce selection bias, but limiting the time frame will also reduce bias that may otherwise have come about from comparing different voting regimes, different member countries, and long-ago time periods. This is the most up-to-date comprehensive dataset available.

Data Collection

Deciding which data source to use is another complication and source of contention in transposition studies. The first problem is deciding which measure to use to determine if a directive has been transposed or not. Some researchers use official EU data, some use the first national transposition measure recorded -- either as recognized by the EU or as recorded by the member state itself, some use the last national transposition measure recorded, others use the issuance of a Letter of Formal Notice, or a referral to the European Court of Justice. Each of these methods for determining whether there has been a delay or not has its justification, but also has its detractions. For instance, using a referral to the European Court of Justice will provide only the most extreme cases of non-transposition. Each country is required to notify the EU of transposition measures taken by the given deadline. If a deadline is missed, the Commission initiates the pre-litigation

phase of the investigation by issuing a letter of formal notice. This letter sets out "the Commission's position on the infringement and (determines) the subject matter of any action, requesting the Member State to comply within a given time limit" (European Commission Secretariat-General). It is only after a lengthy back and forth with continued non-compliance does a case make it before the ECJ. Even after notification, the European Commission may decide not to pursue infringements by bringing it to the attention of the EJC; the Commission enjoys large discretionary power in determining which infringements to pursue. Using ECJ referrals as the measure for non-compliance is overly restrictive and misses many other cases of non-transposition that are settled before this final stage.

Most scholarship recognizes the problems of waiting for infringement proceedings to begin and therefore uses CELEX (for older studies) or EURLEX (for more recent studies) data on transposition notification. CELEX was replaced by EURLEX in January 2005, and it serves as the official repository for transposition records and is updated daily. Both König and Luetgert (2008) and Kaeding (2006) verify that the CELEX documents do not contain any sort of systemic bias in the data provided for transposition. The EURLEX database, with updated reporting requirements, is even less likely to have a systemic bias. While some authors also try to independently verify the information contained in the official EU database, as König and Luetgert (2008) note, doing so may actually introduce a bias. This would occur if some member states are more

forthcoming with publicly accessible national transposition information, thus providing more information about some countries than others.

For this dissertation, I follow the common practice of using EU-provided data. Rather than using the online EURLEX database, I use the data on transposition as reported in the Secretariat General's Annual Reports on the Monitoring the Application of Community Law. This data is derived from the EURLEX database, and is much more accessible for large data projects. Each year, an annual report is published reflecting the state of integration in Europe. The report has an annex entitled Progress in Implementing Directives, and provides a breakdown of directives with a transposition date in that year, including the directive number, title, Official Journal reference, the publication date, and the transposition deadline. Likewise, there is an accompanying annex that details the infringements for non-communication of national measures of transpositions. I created a database listing the directives with transposition dates in each of the years of this study, and cross-referenced it with the annex which lists which directives were not reported as transposed on time, broken down by country and sector. This created a 9976 line database for all 25 member countries across all sectors. These 9976 directives came from an overall total of 440 discrete directives. Most directives applied to every country, though there were some that applied only to one or a few countries. Because there is not enough power in examining sectors where just one directive was issued during this four-year time span, those sectors were dropped from further analysis. They were Agriculture, Competition, and Eurostat.

The Dependent Variable

The dependent variable in this study is a binary variable: was the directive transposed on time (1) or delayed (0). Depending on the focus of the research question, the dependent variable may be binary, or it may instead focus on the length of delay (short delay vs long delay, or it may count the delay in terms of weeks, months, or years). Either method is valid, though focusing on a binary variable makes replicability much easier. A method that tries to measure the length of delay may claim a delay is "short", while another researcher may declare the same elapsed amount of time "long." They are completely subjective statuses. Further, in either case, studies which focus only on delayed instances of transposition again will suffer from selection bias and hinder the application of their findings to a wider spectrum of directives.

Data Analysis

Having examined some of the problems with measurement and data collection and providing justification for the methods I chose, I will now present the data and examine to what extent and where there are statistically significant differences in transposition rates.

Descriptive Data

First, it is important to get an idea of how the data looks. Table 3.1 is a contingency table reflecting the distribution of directives across countries and sectors.

Table 3.1: Contingency Table of Countries and Sectors

Country	Employ-ment	Energy & Transport	Enterprise	Environ-ment	FJS	Health & Consumers	Internal Market	Tax & Custom	Total
Austria	12	47	79	26	16	154	40	16	390
Belgium	13	47	79	26	16	154	40	16	391
Cyprus	18	41	83	32	16	156	40	17	403
Czech	18	51	83	30	16	154	41	21	414
Denmark	13	43	79	26	9	154	40	16	380
Estonia	19	47	83	32	16	157	42	17	413
Finland	13	44	79	26	16	154	40	17	389
France	12	47	79	26	16	154	40	16	390
Germany	13	47	79	26	16	154	40	17	392
Greece	13	43	79	26	16	154	40	17	388
Hungary	19	49	83	32	16	156	44	18	417
Ireland	13	43	79	26	12	154	40	16	383
Italy	13	47	79	26	16	154	40	16	391
Latvia	13	49	81	30	16	158	41	16	404
Lithuania	13	44	79	27	16	154	40	16	389
Luxembourg	13	47	79	26	16	154	40	16	391
Malta	16	43	82	37	16	156	41	17	408
Netherlands	13	47	79	26	16	154	40	16	391
Poland	15	50	84	37	16	156	44	18	420
Portugal	12	43	79	26	16	154	40	16	386
Slovakia	13	49	79	31	16	155	42	18	403
Slovenia	18	47	81	31	16	155	42	19	409
Spain	12	43	79	26	16	154	40	17	387
Sweden	12	43	79	26	16	154	40	16	386
UK	13	47	79	26	12	153	40	16	386
Total	**352**	**1148**	**2003**	**709**	**385**	**3866**	**1017**	**405**	**9901**

We can see from this table that the number of directives assigned per country varies from 380 (Denmark) to 420 (Poland), however the variation in the number of directives per sector varies very little across countries. The distribution of directives across sectors varies widely, from 352 in Employment to 3866 in Health & Consumers.

Below, Figures 3.1 and 3.2 show the mean transposition rate for all directives by country and by sector.

Figure 3.1: Mean Transposition Rate by Country

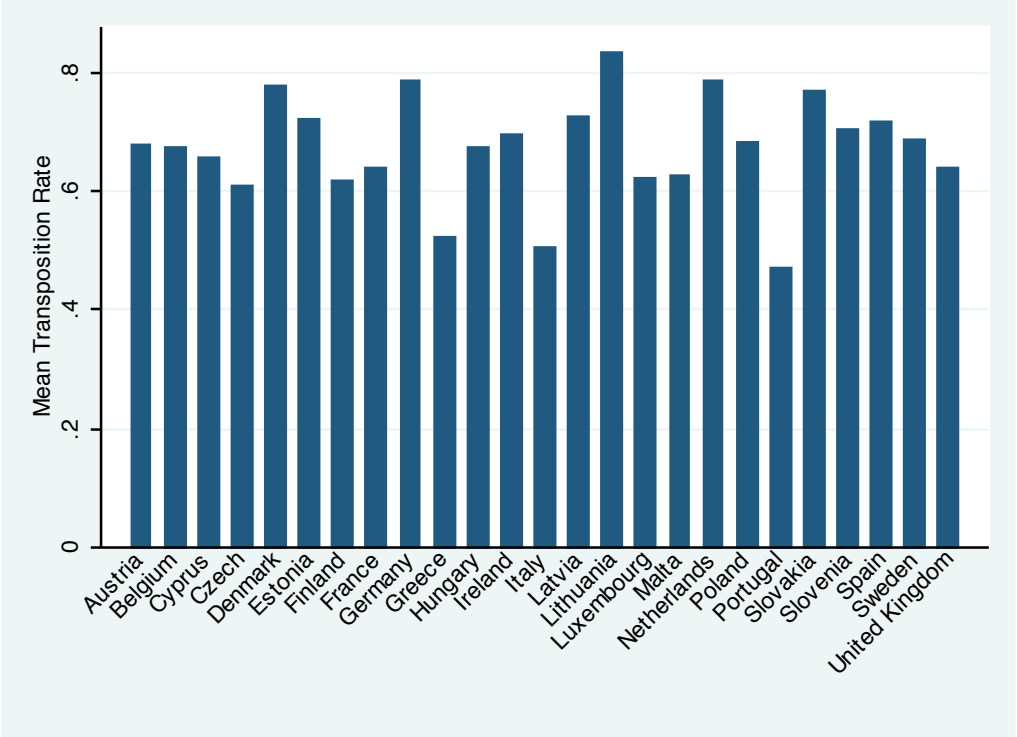
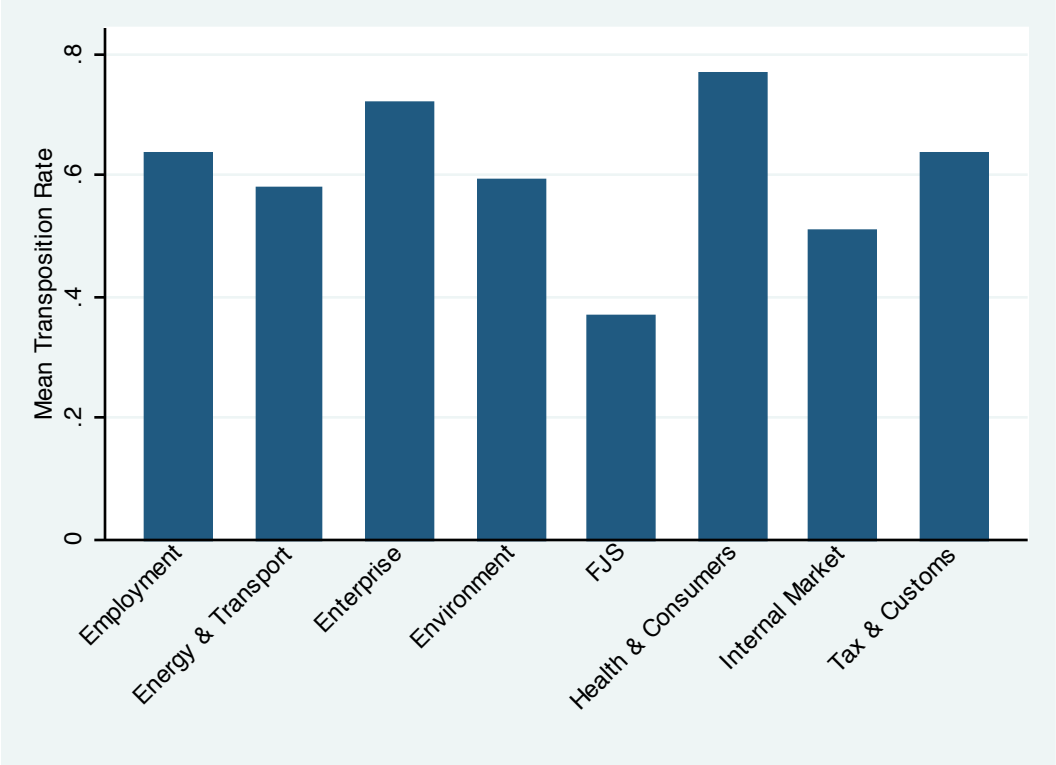


Figure 3.2: Mean Transposition Rate by Sector



We can see from these figures that there is variation in transposition rates across both countries and sectors. Lithuania has the best overall transposition rate from 2005-2008 at 83.3%, while Portugal is the worst performer, transposing just 47.4% of the directives on time. Many of the studies on transposition ignore the comparative transposition rates, and jump right to explaining why there are differences. Two countries that are frequently examined are France and the United Kingdom. But their transposition rates are 63.85% and 63.99%, respectively. Is there really a difference here to explain? If there is no significant difference in transposition rates, trying to determine which

independent variables cause the difference is putting the cart before the horse. Likewise, Netherlands and Germany are often studied, but at 78.52% and 78.57% is there a difference to be explained? What about between France and Germany? Is there a statistically significant difference between 63.85% and 78.57%? It seems like perhaps there is, but it is an empirical question for investigation and should not merely be assumed.

Likewise for studies of sectors, Health & Consumers is the best performer at 76.98%, while Freedom, Justice & Security is worst at 36.88%. It would appear that there is a statistically significant difference here, and below I will examine whether that is indeed the case. However, Health & Consumers is a relatively little-studied field, likewise FJS. Environment, Energy & Transport, and Internal Market are more often studied, but with transposition rates ranging from 51-59%, is there a real difference in those rates? This is what I aim to discover as we continue through this chapter.

Generalized Estimating Equations

There are 440 different directives spread over 25 countries and 8 different sectors in this analysis. Because of the multiplicity, there is a possibility that there is a correlation within the directives across the countries. For example, if one directive is particularly easy to transpose, it may be transposed well across all 25 countries. If another directive is particularly challenging, it may not be transposed well across all 25 countries. There may be correlation between the directive and its transposition rate across the EU member states. Generalized Estimating Equations (GEE) can take account of correlation among

repeated measures. If there is a correlation, GEE will account for it to avoid biased inference. Ignoring it could affect the estimated coefficients, and therefore the inference of their statistical significance.

Assuming an unstructured correlation, that is, that the correlation of transposition rates between any two given countries for the same directive is 0, I developed a correlation matrix as shown below:

Table 3.2: Estimates of the Working Unstructured Correlation Matrix for the First Few Columns

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	1.0000	0.3881	0.3261	0.2584	0.3787
[2,]		1.0000	0.4231	0.2584	0.3334
[3,]			1.0000	0.2831	0.2902
[4,]				1.0000	0.2560
[5,]					1.0000

Table 3.2 shows the estimates for the first five columns of the correlation matrix under the assumption of an unstructured working correlation. If one looks at the full correlation matrix, one will see that the correlation coefficients estimates fall between .20 and .45. This limited range indicates that there is a correlation in transposition rate between countries for the same directives. A zero would indicate no correlation, while a 1 would indicate perfect correlation. Given the limited range, I assumed an exchangeable correlation structure with a value of .305.

Conducting a logistic regression GEE will allow me to see which countries and sectors have significantly higher or lower odds of transposing directives on time. In order

to determine this, though, we need to know higher or lower odds compared to what? To provide a reference point for comparison, I chose to use Belgium for the reference country and Health & Consumers for the reference sector. Belgium has an overall average transposition rate of 67.5% compared to the overall average of all 25 countries of 67%. For the country I chose the most average country as a reference. For the sector comparison I chose Health & Consumers, which has by far the best transposition rate. A valid comparison can still be made using the best performing sector -- each comparison will have a negative coefficient, it is the degree to which it is negative that will allow me to determine its statistical significance.

Below is Table 3.3, which shows the GEE analysis with adjusted p-values using Holm's procedure:

Table 3.3: Output of GEE Analysis with Adjusted p-Values using Holm's Procedure

Coefficients	Estimate	Robust S.E.	Robust z	Robust p-value	Adj Robust P-value
(Intercept)	**1.071**	**0.162**	**6.615**	**0.000**	**0.000**
Austria	-0.007	0.131	-0.055	0.956	1.000
Cyprus	-0.147	0.117	-1.259	0.208	1.000
Czech	-0.363	0.129	-2.805	**0.006**	0.106
Denmark	**0.544**	**0.144**	**3.767**	**0.000**	**0.004**
Estonia	**0.163**	**0.134**	**1.217**	**0.224**	**0.005**
Finland	-0.259	0.124	-2.094	0.036	0.689
France	-0.176	0.123	-1.424	0.154	1.000
Germany	**0.604**	**0.133**	**4.557**	**0.000**	**0.000**
Greece	**-0.660**	**0.116**	**-5.686**	**0.000**	**0.000**
Hungary	-0.085	0.129	-0.659	0.510	1.000
Ireland	0.091	0.136	0.672	0.502	1.000
Italy	**-0.743**	**0.127**	**-5.853**	**0.000**	**0.000**
Latvia	0.219	0.129	1.696	0.090	1.000
Lithuania	**0.942**	**0.150**	**6.294**	**0.000**	**0.000**
Luxembourg	-0.238	0.119	-1.993	0.046	0.812
Malta	-0.295	0.125	-2.360	0.018	0.365
Netherlands	**0.600**	**0.133**	**4.495**	**0.000**	**0.000**
Poland	-0.043	0.125	-0.345	0.730	1.000
Portugal	**-0.869**	**0.125**	**-6.956**	**0.000**	**0.000**
Slovakia	**0.478**	**0.132**	**3.617**	**0.000**	**0.007**
Slovenia	0.086	0.126	0.680	0.496	1.000
Spain	0.223	0.123	1.814	0.070	1.000
Sweden	0.066	0.111	0.596	0.552	1.000
UK	-0.182	0.143	-1.272	0.204	1.000
Employment	-0.235	0.322	-0.730	0.466	1.000
Energy & Trans	-0.479	0.239	-2.004	0.046	0.812
Enterprise	-0.010	0.298	-0.035	0.972	1.000
Environment	-0.293	0.279	-1.047	0.296	1.000
FJS	**-1.567**	**0.230**	**-6.822**	**0.000**	**0.000**
Internal Market	**-0.850**	**0.255**	**-3.335**	**0.001**	**0.019**
Tax & Custom	-0.140	0.334	-0.418	0.676	1.000

The log-odds of transposing on time for the reference country, Belgium, and the reference sector, Health & Consumers) is 1.071. Countries and sectors that have a significantly higher or lower odds of transposing on time relative to the reference group appear in bold. Controlling for sector, we see that Portugal, Italy, and Greece have a

significantly lower odds of transposing compared to Belgium, while Lithuania, Estonia, Germany, Netherlands, Denmark and Slovakia all have a significantly higher odds of transposing on time. At the sector level, Health and Consumers has the highest transposition rate. Yet only Internal Market and FJS have a significantly lower transposition rate.

Chi-square test and standardized Pearson residuals

For the GEE model, I did not consider interaction effects between country and sector. There are 8 sectors and 25 countries. Calculating interaction coefficients would result in having to estimate an additional set of 200 regression coefficients, which cannot be evaluated due to a degrees of freedom problem. As a result, I conducted a Pearson chi-square test between transposition and sector for each country. The results of these tests are below in Table 3.4.

Table 3.4: Chi-square Test for Association Between Sector and Transposition

Country	Austria	Belgium	Cyprus	Czech	Denmark	Estonia	Finland
Raw p-value	1.69×10^{-3}	6.59×10^{-10}	2.87×10^{-4}	2.77×10^{-5}	9.13×10^{-6}	9.20×10^{-7}	8.62×10^{-3}
Adjusted p-value	0.0085	1.58×10^{-8}	0.0020	2.22×10^{-4}	9.13×10^{-5}	1.46×10^{-5}	0.0259
Country	France	Germany	Greece	Hungary	Ireland	Italy	Latvia
Raw p-value	3.14×10^{-6}	2.59×10^{-9}	1.70×10^{-8}	1.49×10^{-2}	3.49×10^{-6}	4.63×10^{-3}	1.44×10^{-5}
Adjusted p-value	4.71×10^{-5}	5.69×10^{-8}	3.57×10^{-7}	0.0298	4.89×10^{-5}	0.0185	1.29×10^{-4}
Country	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Slovakia
Raw p-value	2.26×10^{-14}	4.49×10^{-7}	3.57×10^{-6}	1.76×10^{-7}	8.09×10^{-6}	4.55×10^{-4}	6.47×10^{-8}
Adjusted p-value	5.64×10^{-13}	7.64×10^{-6}	4.89×10^{-5}	3.16×10^{-6}	8.90×10^{-5}	0.0027	1.23×10^{-6}
Country	Slovenia	Spain	Sweden	UK			
Raw p-value	3.99×10^{-6}	2.29×10^{-9}	2.92×10^{-8}	0.330			
Adjusted p-value	4.89×10^{-5}	5.26×10^{-8}	5.84×10^{-7}	0.330			

Table 3.4 gives the raw and Holm's adjusted p-values for the Pearson chi-square test of association between sectors and transposition within each country. Except for the UK, all other countries show a statistically significant association. In order to determine the sectors that deviate from the assumption of independence, I evaluate the standardized Pearson residuals and their Holm's adjusted p-values, which are provided in Table 3.5. Because standardized Pearson residuals do not take into account multiple testing, I have provided adjusted p-values that do correct for multiple tests.

Table 3.5: Standardized Pearson Residuals for Transposing on Time (adjusted p-values)

Country	Employment	Energy & Transport	Enterprise	Environment	FJS	Health & Consumers	Internal Market	Tax & Customs
Austria	-1.935 (0.1734)	-1.558 (0.2979)	-1.418 (0.3123)	-1.964 (0.1734)	-0.430 (0.6670)	**4.233 (9.22x10^{-5})**	0.365 (0.6670)	-0.975 (0.4943)
Belgium	-0.468 (0.6396)	-1.240 (0.5253)	1.253 (0.5253)	-1.107 (0.5253)	**-3.708 (6.26x10^{-4})**	**5.309 (4.41x10^{-7})**	**-4.992 (2.10x10^{-6})**	-0.438 (0.6396)
Cyprus	0.106 (0.4579)	-1.684 (0.2764)	1.458 (0.2764)	-1.536 (0.2764)	**-3.479 (0.0020)**	**3.186 (0.0051)**	-0.772 (0.4400)	-1.635 (0.2764)
Czech	1.503 (0.2657)	-0.626 (0.6539)	**2.636 (0.0252)**	-0.490 (0.6539)	-1.953 (0.1269)	-0.779 (0.6539)	**-3.357 (0.0032)**	**3.312 (0.0032)**
Denmark	-0.766 (0.5771)	-2.144 (0.0800)	1.360 (0.3479)	**-3.551 (0.0013)**	-0.009 (0.5771)	**4.040 (0.0002)**	-0.869 (0.5771)	**-2.747 (0.0180)**
Estonia	0.176 (0.5351)	-0.620 (0.5351)	1.178 (0.4348)	-1.234 (0.4348)	**-4.826 (5.57x10^{-6})**	**3.856 (4.03x10^{-4})**	-1.885 (0.1783)	-1.777 (0.1887)
Finland	-0.012 (0.6717)	-1.036 (0.6003)	**2.660 (0.0313)**	-0.852 (0.6003)	-1.508 (0.3289)	0.424 (0.6717)	**-2.637 (0.0313)**	1.792 (0.2196)
France	-1.01 (0.4658)	-0.326 (0.4658)	**2.770 (0.0168)**	-1.944 (0.1039)	**-3.303 (0.0034)**	**2.518 (0.0295)**	**-3.661 (0.0010)**	0.948 (0.4658)
Germany	-1.522 (0.1920)	-0.731 (0.4649)	**3.967 (2.55x10^{-4})**	-1.696 (0.1798)	**-4.710 (9.90x10^{-6})**	**2.520 (0.0293)**	**-3.427 (0.0018)**	0.388 (0.4649)
Greece	-2.147 (0.0794)	-1.132 (0.3862)	-0.841 (0.3862)	-2.278 (0.0682)	**-3.257 (0.0039)**	**6.321 (1.04x10^{-9})**	-1.981 (0.0951)	0.941 (0.3862)
Hungary	1.621 (0.3150)	**-2.558 (0.0368)**	**2.943 (0.0130)**	-0.582 (0.8405)	-0.404 (0.8405)	-0.808 (0.8386)	0.494 (0.8405)	-1.070 (0.7112)
Ireland	-1.855 (0.1588)	-1.709 (0.1748)	-0.238 (0.4061)	**-2.671 (0.0026)**	-0.850 (0.3956)	**5.440 (2.13x10^{-7})**	-1.371 (0.2554)	-2.280 (0.0678)
Italy	-0.329 (1.0000)	0.995 (0.9589)	-0.253 (1.0000)	0.339 (1.0000)	**-4.137 (0.00014)**	1.866 (0.2170)	-0.753 (1.0000)	-0.563 (1.0000)
Latvia	-1.534 (0.2503)	-0.866 (0.5796)	-0.207 (0.7300)	2.229 (0.0646)	**-3.203 (0.0044)**	**3.520 (0.0017)**	**-3.224 (0.0044)**	-0.345 (0.7300)
Lithuania	0.130 (0.9673)	-1.994 (0.0922)	**2.770 (0.0140)**	-0.261 (0.9673)	**-5.014 (1.87x10^{-6})**	**4.650 (9.95x10^{-6})**	**-5.958 (1.02x10^{-8})**	0.461 (0.9673)
Luxembourg	**-2.977 (0.0102)**	**-2.674 (0.0225)**	1.482 (0.1736)	-0.932 (0.1756)	-2.100 (0.0893)	**4.893 (3.97x10^{-6})**	-2.054 (0.0893)	-1.573 (0.1736)
Malta	0.000 (1.0000)	0.042 (1.0000)	1.723 (0.2210)	0.312 (1.0000)	**-5.268 (5.51x10^{-7})**	1.789 (0.2210)	**-2.594 (0.0332)**	0.704 (0.9633)
Netherlands	0.545 (0.2930)	-1.478 (0.1395)	1.831 (0.1006)	-2.182 (0.0804)	-2.214 (0.0804)	**4.557 (2.07x10^{-5})**	**-3.822 (4.63x10^{-4})**	-2.214 (0.0804)
Poland	1.571 (0.2322)	-2.278 (0.0568)	0.209 (0.7010)	1.405 (0.2399)	**-3.224 (0.0044)**	**3.200 (0.0044)**	**-3.405 (0.0026)**	0.384 (0.7010)
Portugal	0.183 (0.4276)	-1.745 (0.2025)	-1.630 (0.2025)	-0.946 (0.3441)	-1.834 (0.2002)	**3.537 (0.0016)**	-1.660 (0.2025)	**2.769 (0.0197)**
Slovakia	0.650 (0.5464)	**-4.290 (6.25x10^{-5})**	0.907 (0.5464)	-1.302 (0.3859)	**-2.642 (0.0247)**	**4.973 (2.64x10^{-6})**	**-2.491 (0.0319)**	0.637 (0.5464)
Slovenia	1.775 (0.1517)	-2.027 (0.1281)	-1.041 (0.2979)	-1.941 (0.1307)	0.431 (0.3333)	**4.954 (2.92x10^{-6})**	**-3.016 (0.0090)**	-1.711 (0.1517)
Spain	**-1.683 (0.0092)**	**-2.431 (0.0030)**	**2.364 (0.0030)**	**-2.525 (0.0029)**	**-3.086 (0.0006)**	**5.013 (2.14x10^{-6})**	**-3.565 (0.0001)**	0.092 (0.4632)
Sweden	1.114 (0.5308)	-1.925 (0.1355)	0.752 (0.6783)	-0.372 (0.6783)	**-3.844 (3.62x10^{-4})**	**4.767 (7.49x10^{-6})**	**-4.126 (1.29x10^{-4})**	-0.542 (0.6783)
UK	-1.363 (0.6053)	-1.321 (0.6053)	0.381 (1.0000)	0.576 (1.0000)	-0.415 (1.0000)	1.321 (0.6053)	0.489 (1.0000)	-1.723 (0.3398)

The Pearson residuals show us which countries do well or poorly, not compared to any other country, but comparing it against their own transposition average. For instance, Lithuania, which has the highest transposition record of all countries, averaging over 83% transposed on time, even compared to its own high standard, transposes directives in Enterprise and Health & Consumers significantly better than other sectors, and transposes directives in FJS and Internal Market significantly worse. It tells us nothing about how Lithuania compares to any other country, just how well it transposes the sectors compared to itself. Likewise, within its own low standard, Portugal transposes directives in Health & Consumers and Tax & Customs significantly better than it does those in other sectors, yet no sector is significantly worse.

It is interesting to note that almost all countries transpose Health & Consumers directives at a significantly higher rate, exceptions being Czech Republic, Finland, Hungary, Italy, Malta, and the UK, with Czech Republic and Hungary being the only two countries where Heath & Consumers actually had a negative coefficient, though not statistically significant. Internal Market and FJS are the two stand-outs for sectors that perform significantly poorly more often than not. In FJS, only Slovenia garnered a positive coefficient, while in Internal Market, only Hungary and the UK had a positive coefficient, though again, not in a statistically meaningful way.

Logistic Regression

The Pearson chi-square test shows which sectors within each country have a statistically significant higher or lower transposition rate compared to a null hypothesis of

no association between country and sector. Conducing a logistic regression we can fit the model for each country separately and see the log odds ratio of transposing on time for any given sector compared to the reference sector Health & Consumers. A logistic regression is appropriate for this part of the analysis because a logistic regression allows one "to predict a discrete outcome... from a set of variables that may be continuous, discrete, dichotomous, or a mix of any of these" (Connor). My dependent variable is dichotomous -- taking on a value of 0 if the directive was not transposed on time and a 1 if it was transposed on time. A linear regression would be inappropriate because with a linear regression, the predicted values could become less than zero or greater than one, which is impossible with dichotomous data like transposed on time (1) or delayed (0). Further, one "of the assumptions of regression is that the variance of Y is constant across values of X (homoscedasticity). This cannot be the case with a binary variable... (because) as P approaches 1 or 0, the variance approaches zero" (Brannic).

Below in Table 3.6 are the results providing the regression coefficient estimates. The coefficient for Health & Consumers as reported is the log-odds of transposing on time for this particular sector, whereas the other coefficients measure the log-odds ratio of transposing on time for that sector relative to Health & Consumers.

Table 3.6: Regression Coefficients for Logistic Regression on Transposition Rate (Holm's adjusted p-values) – Health & Consumers as Reference Sector

Country	Health & Consumers	Employment	Energy & Transport	Enter-prise	Environment	FJS	Internal Markets	Tax & Customs
Austria	1.3782 (5.59×10^{-11})	**-1.7147 (0.0224)**	**-1.0781 (0.0126)**	**-0.9410 (0.0125)**	**-1.3782 (0.0124)**	-0.8674 (0.2350)	-0.5309 (0.2350)	-1.1269 (0.1134)
Belgium	1.5939 (1.01×10^{-12})	-1.1239 (0.1585)	**-1.2062 (0.0051)**	-0.5780 (0.1585)	**-1.2838 (0.0179)**	**-2.6925 (7.45×10^{-5})**	**-2.3248 (4.43×10^{-8})**	-1.0831 (0.1585)
Cyprus	1.0980 (2.26×10^{-8})	-0.4055 (0.8938)	-0.9520 (0.0531)	0.1398 (0.893)	-0.9734 (0.0742)	**-2.1972 (0.0020)**	-0.6931 (0.1872)	**-1.2164 (0.0072)**
Czech	0.3400 (0.1853)	0.9118 (0.4634)	-0.0647 (1.0000)	0.6789 (0.1353)	-0.0727 (1.0000)	-0.8517 (0.4634)	-0.8909 (0.0990)	2.6548 (0.0841)
Denmark	2.0223 (5.95×10^{-15})	-1.2110 (0.1885)	**-1.3981 (0.0029)**	-0.3976 (0.6251)	**-2.0223 (9.81×10^{-5})**	-0.7695 (0.6251)	-1.0529 (0.0610)	**-2.0223 (0.0018)**
Estonia	1.5717 (8.59×10^{-13})	-0.5421 (0.5757)	-0.8140 (0.0934)	-0.3573 (0.5757)	**-1.0609 (0.0477)**	**-3.038 (4.67×10^{-5})**	**-1.1860 (0.0105)**	**-1.4539 (0.0304)**
Finland	0.5317 (0.0116)	-0.0617 (0.9368)	-0.3493 (0.9368)	0.5500 (0.4438)	-0.3995 (0.9368)	-0.7829 (0.6255)	-0.8339 (0.1456)	1.0087 (0.6255)
France	0.9163 (2.24×10^{-6})	-0.9163 (0.5177)	-0.4394 (0.6245)	0.3042 (0.6900)	-1.0700 (0.0603)	**-2.0149 (0.0051)**	**-1.4271 (8.79×10^{-4})**	0.1823 (0.7629)
Germany	1.7391 (1.13×10^{-13})	-1.2691 (0.1344)	-0.6693 (0.1948)	1.1915 (0.1344)	-1.1037 (0.0945)	**-2.5282 (1.08×10^{-4})**	**-1.4374 (0.0015)**	-0.1993 (0.7679)
Greece	0.9483 (1.04×10^{-6})	**-2.1523 (0.0032)**	**-1.1819 (0.0027)**	**-1.0240 (0.0015)**	**-1.7593 (8.22×10^{-4})**	**-2.8942 (9.77×10^{-4})**	**-1.4592 (6.34×10^{-4})**	**-1.3050 (0.0128)**
Hungary	0.0607 (0.0023)	1.0662 (0.5220)	-0.5669 (0.5220)	0.8243 (0.0781)	-0.0969 (1.0000)	-0.0969 (1.0000)	0.2600 (1.0000)	-0.3846 (1.0000)
Ireland	1.7397 (1.13×10^{-13})	**-1.8939 (0.0048)**	**-4.4112 (0.0014)**	**-0.9696 (0.0068)**	**-1.8939 (2.10 $\times10^{-4}$)**	**-1.4032 (0.0254)**	**-1.3342 (0.0028)**	**-1.9910 (0.0016)**
Italy	0.2612 (0.864)	-0.4154 (1.000)	0.0389 (1.0000)	-0.2865 (1.0000)	-0.1071 (1.000)	-16.827 (1.0000)	-0.4619 (1.0000)	-0.5123 (1.0000)
Latvia	1.5353 (1.37×10^{-12})	-1.3812 (0.1004)	-0.8114 (0.1116)	-0.6104 (0.1756)	0.6619 (0.3929)	**-2.0462 (0.0001)**	**-1.4865 (5.28×10^{-4})**	-0.7469 (0.3929)
Lithuania	2.7795 (4.72×10^{-15})	-1.0748 (0.6054)	**-1.7987 (9.59×10^{-4})**	-0.0849 (0.8828)	-1.2979 (0.1253)	**-3.2903 (6.76×10^{-7})**	**-2.7795 (1.84×10^{-8})**	-0.8336 (0.6308)
Luxembourg	1.2238 (1.57×10^{-9})	**-2.4277 (0.0021)**	**-1.4373 (2.92×10^{-4})**	-0.3945 (0.2049)	**-1.0696 (0.0292)**	**-1.7346 (0.0066)**	**-1.3239 (0.0021)**	**-1.4751 (0.0187)**
Malta	0.7514 (9.50×10^{-5})	-0.2404 (1.0000)	-0.2282 (1.0000)	0.1310 (1.0000)	-0.1383 (1.0000)	-17.3175 (1.0000)	**-0.9965 (0.0380)**	0.1241 (1.0000)
Netherlands	2.2264 (2.04×10^{-15})	-0.5217 (0.6786)	**-1.3690 (0.0033)**	-0.4048 (0.6786)	**-1.7564 (0.0018)**	**-1.9754 (0.0028)**	**-2.0258 (8.89×10^{-6})**	**-1.9751 (0.0028)**
Poland	1.2404 (8.21×10^{-10})	0.6313 (1.0000)	**-1.0800 (0.0081)**	-0.4381 (0.5993)	0.0470 (1.0000)	**-2.0289 (0.0024)**	**-1.4227 (5.05×10^{-4})**	-0.2849 (1.0000)
Portugal	0.3409 (0.1483)	-0.3409 (0.5700)	**-0.9651 (0.0507)**	**-0.7781 (0.0471)**	-0.8109 (0.1869)	-1.4395 (0.0822)	**-0.9600 (0.0564)**	1.1254 (0.1869)
Slovakia	2.2336 (1.60×10^{-15})	0.5288 (0.7291)	**-2.1110 (6.18×10^{-7})**	-0.7828 (0.1427)	**-1.4917 (0.0061)**	**-2.2336 (4.33×10^{-4})**	**-1.7481 (1.74×10^{-4})**	-0.6242 (0.7291)
Slovenia	1.6971 (1.69×10^{-13})	0.3823 (0.6665)	**-1.3970 (9.28×10^{-4})**	**-1.0591 (0.0041)**	**-1.5030 (0.0019)**	-0.5985 (0.6665)	**-1.6971 (5.63×10^{-5})**	**-1.5918 (0.0054)**
Spain	1.7918 (5.77×10^{-14})	**-1.7918 (0.0118)**	**-1.5581 (2.79×10^{-4})**	-0.2564 (0.4929)	**-1.7918 (3.27 $\times10^{-4}$)**	**-2.3026 (2.79×10^{-4})**	**-1.8918 (9.45×10^{-6})**	-0.9160 (0.2283)
Sweden	1.5483 (2.20×10^{-12})	0.0610 (0.9394)	**-1.3147 (0.0021)**	-0.5963 (0.1961)	-0.9123 (0.1961)	**-2.6469 (1.01×10^{-4})**	**-1.9538 (2.93×10^{-6})**	-1.0375 (0.1961)
United Kingdom	0.7525 (1.12×10^{-4})	-0.9067 (0.6821)	-0.5390 (0.6821)	-0.0972 (1.0000)	0.0584 (1.0000)	-0.4161 (1.0000)	-0.0200 (1.0000)	-1.0038 (0.4172)

One way to read this is to see that the log-odds of transposing on time for Health & Consumers in Lithuania is 2.7795. The value of -3.2903 in FJS corresponds to the regression coefficient for FJS and is the log-odds ratio of transposing on time for FJS compared to Health & Consumers. Another way to look at this is to exponentiate the value, e^(-3.2903) = .04, indicating that odds of transposing on time for FJS is .04 times the odds of transposing on time for Heath & Consumers in Lithuania.

Analysis

Analyzing four years of transposition data for 25 Member States gives us some interesting results. First, we can see from the GEE analysis that there is a correlation in the transposition rates of Member Countries by directive. That is, the correlation matrix shows that there is a correlation between transposition times for the same directive across all of the countries. If there were no correlation, the correlation would have been zero. But at .305 it shows there is a slight to moderate correlation. This correlation meant that I could not continue with the analysis using 9976 independent observations, because they are not truly independent. Rather, for ensuing analyses, I instead used the 440 different directives as the dependent variable, rather than each directive-state combination as the dependent variable. This lowered the degrees of freedom and limited some investigational possibilities, but provides for a more accurate picture of transposition in Europe.

Using Belgium as the standard, since its transposition rate is close to the average transposition rate for all countries, I used the GEE analysis to see which countries have a higher or lower odds of transposing directives on time. In this case, Denmark, Germany, Lithuania, Estonia, Netherlands and Slovakia transpose at a rate that is significantly above the average, while Greece, Italy, and Portugal are significantly behind the norm in terms of transposition rates. None of the poor performers is particularly surprising-- all three are frequently cited as examples of poor performers, but we now have statistical data to back up that claim. For the good overall performers, we now know which countries to focus on if trying to explain good transposition.

Comparing sectors we see that Heath & Consumers is far and away the best performer. Obviously compared to this sector, all will do worse, and we see that the coefficients are indeed negative. However, only FJS and Internal Market are significantly worse. This is somewhat surprising. The overall rate for Health & Consumers is 77%. In Energy & Transport it is only 58% and in Environment 59%, yet even a 18-19% difference in transposition rates is not enough to be statistically significant. Therefore, looking for causal mechanisms to explain differences in transposition rates between the sectors should be focused only on differences between Internal Market or FJS and Health & Consumers, since the differences between the other sectors are statistically insignificant.

Moving on to the results of the chi-square test, it is perhaps not surprising that there is an association between country and sector in transposition rates. The chi-square

test takes as its null hypothesis that there is no association between country and sector when it comes to transposition rates. Any statistically significant difference in the results of this analysis allow us to reject the null hypothesis and say that there is an association between country and sector in their transposition rates. While the results show an overwhelming ability to reject the null, it is surprising that there is no statistically significant difference for the UK. An interesting case study would be to see if there are extraordinary circumstances in the UK that account for this.

The chi-square tests tells us that there are differences in transposition rates among the sectors, but it does not tell us where those differences lie. The next statistical process, the standardized Pearson residuals, tells us specifically which sectors deviate from the null hypothesis' assumption of independence. Because there are multiple tests being run on the data, a correction using the Holm's procedure takes into account the multiple testing so that the coefficients and standard errors are not misrepresented.

Some interesting findings come up as a result of the Pearson residuals test. First, it is not surprising based on the results of the chi square test that the UK shows no significant deviation in transposition rates between the sectors. Another interesting country-based observation is the transposition rates in Spain. While most countries transpose most sectors with no significant deviation from the norm for their country, Spain is significantly high or low in all sectors except Tax & Customs. Spain has an overall transposition rate of 71.6%, not significantly different from the average rate for all EU countries of 67%. However, that 71.6% average is made up of significant highs and

lows in transposition, varying by sector. Employment, Energy & Transport, Environment, FJS and Internal Market are negative and statistically different than the assumed null hypothesis of no association. Meanwhile, Enterprise and Health & Consumers are positive and significant, indicating a strong likelihood of association between transposition rate and the sector. Tax & Customs is also positive, though it is not statistically significant. Also, most countries show statistically significant deviation in transposition rates in 1-3 sectors. The exceptions, excluding the two cases already discussed, are France, Germany, and Lithuania. Each of those countries deviates from their own individual norms in the same four categories: Enterprise, FJS, Health & Consumers, and Internal Market. Interestingly enough, each of them also has the same sign on the coefficient, indicating the same problem (FJS, Internal Market) and strength (Enterprise, Health & Consumers) sectors.

It is really the sectors where we gain some interesting insights. While it should be expected that some countries do better or worse in one or another sector, there are three sectors where there is a pattern that seems to override any sort of nation-based explanation. Health & Consumers directives are overwhelmingly transposed at a better rate than the null would suggest, and FJS and Internal Market directives prove to be areas of difficulty for most countries. Of the 25 countries in this study 92% show a positive predisposition for transposing Health & Consumers directives better than their own average rate for their country (that is, not comparing to other countries or to all member countries grouped together). Seventy-two percent of them do so to a statistically

significant degree. Even though Portugal is the worst overall transposer, just based on its own overall transposition rate, it transposes Health & Consumers directives at a significantly higher rate. From the best performer, Denmark, to the worst, Portugal, there is apparently something unique with Health & Consumers directives that make them particularly easy to transpose, and most countries take advantage of that.

A similar assessment can be made of the worst performing sectors. Eighty-eight percent of Internal Market directives have a negative log-odds ratio of being transposed at an average rate for each country, 56% to a statistically significant degree. Of the five best performing countries (Denmark, Germany Lithuania, Netherlands, and Slovakia), all but Denmark transpose Internal Market directives at a significantly worse rate. Only Austria, Hungary, and the UK transpose Internal Market directives better than average, but none to a significant extent.

Likewise we see very poor results in the field of FJS. Ninety-six percent of EU Member States transposed FJS directives worse than their own individual averages (only Slovenia exhibits a statistically insignificant positive coefficient), 58% of them significantly so. Again, of the five best performing countries, we see that three of them do significantly worse in transposing FJS directives, compared to their own high standards, and the other two, Slovakia and Denmark, still have negative coefficients, though not marked as significant.

The fact that Health & Consumers does so well and FJS and Internal Market do so poorly overall suggests that those are areas for further examination. We can gain even

more insights into transposition rates when we look more closely at the results of Table 3.6. In this analysis, I examined how well each country transposes directives in different sectors not compared to a null hypothesis of no association, but compared to a reference sector -- Health & Consumers. In this way I can show which countries transpose directives in different sectors differently than a reference sector, thereby showing where there are large discrepancies in transposition rates within each country.

Using Health & Consumers as the reference, and knowing that Health & Consumers is the sector with the best overall transposition rate, we can expect that most of the coefficients in this analysis will be negative, and indeed they are. Occasionally there is a sector in a country with a positive coefficient compared to Health & Consumers (for instance, Tax & Customs in Czech), but it is never statistically significant.

To examine Denmark as an example, using Table 3.5 we see that Denmark transposes directives in Environment, Health & Consumers, and Tax & Customs significantly differently than its own high average. Yet when we look at Table 3.6, we see that when we compare transposition rates to a reference sector (Health & Consumers), not only are Environment and Tax & Customs significantly different than Health & Consumers, but so is Energy & Transport. Where Energy & Transport was not significantly different from Denmark's average transposition rate, it is significantly different from its Health & Consumer's rate.

Another set of interesting cases are those countries that do not do significantly worse than Health & Consumers in any sector. One example of this is Italy. In Table 3.5

we see that Italy was not significantly better in transposing Health & Consumers directives than average, but it was significantly worse at transposing FJS directives. Yet when we look at the results of the logistic regression in Table 3.6 we see that the difference between FJS, Italy's worst performing sector, and Health & Consumers, its best performing sector, is not significantly different. Other countries that show a similar lack of variation in transposition rates when compared to Health & Consumers are Czech, Finland, Hungary, and of course the UK where there has consistently been no significant variation.

At the other end of the spectrum are those countries that do significantly worse than Health & Consumers in every other sector. These countries are Greece and Ireland. Greece and Ireland transpose directives in every sector at a significantly worse rate than they each transpose Health & Consumers directives. This indicates that these two countries operate at the extremes -- they transpose Health & Consumers very very well, and transpose the other directives very very poorly.

Conclusion

To summarize the findings of this chapter, there is indeed a "there" there. There are differences in sectors and countries in their transposition rates, however they are not always where one would expect. The worst performing countries are the countries usually assumed in the literature -- Portugal, Italy, and Greece, while the best transposer, Lithuania, is also substantiated. We also find that Denmark, Germany, Estonia,

Netherlands, and Slovakia also all significantly transpose better than average. Examining the sectors we see from the chi-square test that there is reason to reject an assumption of independence between country and sector transposition rates (except for the UK), and the standardized Pearson residuals show us where those differences are. Specifically, Health & Consumers overwhelmingly does better than average, while Internal Market and FJS do significantly worse than average. Looking at country results, there is generally variation in how well or poorly countries transpose in each of the sectors, however Spain does significantly poorly in all sectors except Tax & Customs, while the UK is average across the board with no significantly distinct transposition rates among the sectors. These overall findings are further supported through logistic regression. Countries vary in how well they transpose other sectors compared to Health & Consumers, with the exceptions of Italy, Finland, and Czech, where there are no significant differences, and Ireland and Spain where every sector is significantly worse than Health & Consumers. Likewise in terms of a sector analysis, FJS and Internal Markets are overwhelmingly transposed poorly in each country compared to the Health & Consumers transposition rate.

Indeed, there are country differences that are significant and should be explored. The findings from this study, which explores all countries (except Bulgaria and Romania) from 2005-2008 for all directives in all sectors provides an unbiased sample (indeed, the entire population) from which to examine country differences. Rather than assuming difference, through logistic regression I found the countries that have the best and the

worst transposition rates in a statistically significant way. This can provide the foundation for further work to explore why those differences exist. Exploring these differences is not the subject of this dissertation, but a few brief statements can be made with respect to the findings in this study vis a vis the literature reviewed in Chapter II.

State-based variables are frequently examined as the source of transposition differences. How do the findings from my large-n analysis jibe with the analyses of other scholars? First, some studies have suggested that federalist systems will perform worse than unitary systems (Haverland and Romeijn, Konig and Luetgert). Haverland and Romeijn found that federal systems of Germany and Spain (acknowledging that Spain merely has features of a federalist system and is not one in a legal sense) had more problems with serious delay than unitary systems of the United Kingdom, Netherlands, and Greece. Though my findings show that Greece is particularly poor at transposing directives despite being unitary, while the UK is neither a poor nor a good transposing country. The greater breadth and depth of my data allows us to disconfirm this hypothesis.

Other state-based variables, such as veto players and goodness of fit among others, are also frequently used in transposition analyses. Due to the size and structure of my dataset, I am unable to comment on how other scholars' findings relate to the output of my dataset. Veto players, corruption, etc vary from country to country and time period to time period. The number of possible independent variables multiplied over the 25 EU member states presented more interactions to explore than one researcher can in the

course of one dissertation. However, my findings do provide insights into where the distinctions are in transposition and lay a solid foundation for future work on examining state-based differences.

What I did choose to focus on is the lesser-examined issue of sector differences. I found that there are differences in transposition rates between sectors that transcend the different transposition rates between countries. That Health & Consumers is overwhelmingly transposed well and that FJS and Internal Market are overwhelmingly transposed poorly is a significant new finding. By examining all of the directives in detail, we can now focus our efforts to explain the differences found on those sectors where there actually are differences to be explained.

In the next chapter, I will take this analysis of cross-sectoral variation to the next step. I will take four independent variables that could affect transposition rates and examine if they do indeed help or hinder transposition and then I will determine if those factors are more prevalent in some sectors than in others. By reframing the discussion to look at sectoral differences, I have found an under-explored path to explain the success or failure of European transposition.

CHAPTER IV: DIRECTIVE-SPECIFIC INFLUENCES ON MEMBER STATE TRANSPOSITION

Introduction

Having found that there are statistically significant differences in transposition rates, it is now appropriate to inquire as to what factors may account for those differences. The extant literature is rich with attempts to identify the significant factors that affect transposition. I highlighted many of these in Chapter II, so will not repeat those studies and their findings here. But it is instructive to reiterate that all of the studies have produced conflicting results. There is no overwhelming consensus yet around which variables affect transposition. In his recent review of quantitative work on the subject, Toshkov (2010) notes that "the causal inferences advanced in the existing literature are often weakly supported and sometimes contradictory when all studies are considered [and he] suggests that only causal relationships that are specific for a certain time period, policy area, country, or type of legislation can be supported by empirical data, which means that broad generalizations about compliance in the EU might be impossible to uncover" (p. 2).

I believe that Toshkov is correct that there is currently no way to compare one study with another. Each study, with its own means for collecting and interpreting data over different countries, policy sectors, and time periods, makes comparisons nearly impossible. This is a problem I seek to rectify in conducting this study by suggesting a way to gather data in a consistent manner that is replicable for any scholar. Because of

the way I have gathered and organized the data, I believe the present analysis does allow us to conduct causal examinations across policy area, countries, and types of legislation (though I concur with his assessment on the need to restrict certain time periods because of the different sectors, voting rules, countries in the EU, etc. that make examining across a large time period unwise).

As I explained in Chapter II, it important to have consonance between the independent variables chosen and the outcome one is trying to explain. Most studies focus on explaining cross-national differences in transposition, and as such examine such variables as veto power, federalism, corruption, and other factors that change from country to country. However, I show in Chapter III that while cross-country differences do exist, they are neither the most interesting nor the most profound. Rather, differences across sectors are frequently much more powerful than any country differences. This chapter, therefore, makes an initial attempt to identify some variables that could affect differences in transposition rates between the sectors.

The Variables

There are four variables that I examine in this chapter that I anticipate will have an effect on transposition rates. I will briefly examine each of these, then turn to the logistic regression analysis.

Time to Transpose

The assumption behind this variable is straightforward: the more time that a country is given to transpose a directive, the more likely it will be transposed on time. In the time period examined in this study, transposition deadlines ranged from zero months to 80 months, with an average time of 11.89 months. The expectation is that if there are sectors where transposition deadlines are often brief, there will be more delays in the transposition of directives in that sector.

An alternative postulation is that if a directive is given a substantial amount of time for transposition, it must be that that directive is particularly complicated and therefore requires more time. In this case, the argument could be made that the longer time made available for transposition could actually be a signal for anticipated transposition delay because more complex directives are thought to be more difficult to transpose on time. One way to examine whether this hypothesis is true is to combine the amount of time given to transpose with the number of recitals in a directive (see below). If a directive has a high number of recitals, a proxy for complexity, and a long period of time for transposition, we would expect those to be more delayed than sectors that are dominated by short transposition times in conjunction with fewer recitals.

Number of Recitals

The number of recitals serves as a proxy for the complexity of the directive. The recitals "are meant to state the purpose of the directive and to describe each of the main provisions of the directive" (Kaeding 2006, p. 236). If a directive has a high number of

recitals, this would be an indication of the complexity of the directive and would indicate a higher likelihood of delayed transposition. If there are sectors that have a comparatively high number of recitals, those sectors may exhibit more delays than sectors with fewer average recitals. Recitals range from one to eight-five, with the average being 13.567.

Issuing Authority

The body that issues the directive is another potential influential factor. Council directives are more often focused on major policy issues, while Commission directives tend to be more technical in nature. Major policy changes are likely to encounter more resistance and therefore increase the likelihood of transposition delay while the different parties in government work to adapt the requirements to their local situation. Technical directives, though, are less controversial and are more likely to gain quick approval. If there are sectors that are dominated by Council directives, I would expect them to be plagued with more transposition delays than sectors dominated by Commission directives, which should be transposed more easily.

New or Amendment

Conventional wisdom for this variable is that new directives will more likely be delayed than amendments. "Amendments are usually rather technical in nature, either adapting legislation to 'technical progress' (a phrase often used in directives) or gradually deepening the requirements to be met" (Mastenbroek 2003, p. 376). It will be interesting to note whether there is a correlation between the directives issued by the Commission and those directives that are amendments. If technical directives are more often

administered by the Commission, and amendments are often more technical in nature, we would expect that amendments issued by the Commission would be the most readily transposed set of directives, and if this type dominates one or another sector, that their transposition rates should be higher than others.

There is a good reason to believe that each of these variables could affect transposition timeliness. If the distribution of these variables varies from sector to sector, that could support the claim that that particular variable helps or hinders transposition. For instance, if Time to Transpose is found to be a significant variable -- that is, that the longer time allowed to transpose a directive the higher the likelihood of it being transposed on time -- it would be important to see if those sectors that have a higher than average transposition rate also have a higher percentage of directives with a longer Time to Transpose. Conversely, if Council directives are found to have a delaying effect, do those sectors with poor transposition rates have more directives issued by the Council than by the Commission? The next section will provide the results of the descriptive data analysis and the logistic regression analysis.

Composite Data Analysis

In the previous chapter, Generalized Estimating Equations (GEE) found that there was a correlation among the directives with regard to their transposition. So rather than looking at each directive independently for each country, the directives were looked at without respect to country. In this section, however, I am examining the effects of

independent variables on each directive, and the directive may have been transposed on time in some countries but not in others. For this reason, rather than examining just 440 different directives, I am examining 9678 independent country directives. This number is slightly different than the 9976 in the previous chapter. In this stage of the analysis I am omitting 298 country-directives whose reliability could not be confirmed. The Central and East European countries that joined the European Union in 2004 were required to transpose the vast majority of the *acquis* before their admittance. However, there were some directives that were allowed to be transposed after May 1, 2004. Which directives and as applied to which countries varied considerably. In this section of the analysis I examine, as one of the variables, the length of time available for a country to transpose a directive. Including a directive that was transposed by most countries prior to acceptance into the EU, but for which one or two countries received an extension would have skewed the time to transpose variable. In these few cases I chose to leave them out of the database for this section of the analysis. These data points should not skew the results of the analysis as they were not all from just one or two sectors, but were from many sectors and therefore out of a field of nearly 10,000 directives, these couple of hundred should not create a bias in the results.

Overall Descriptive Statistics

To begin with, I will first present several tables that show the distribution of directives by the four independent variables in this study.

Table 4.1: Distribution of Time to Transpose (Months)

Amendments		New Directives		Amendments		New Directives	
Time to Transpose (Months)	Frequency	Time to Transpose (Months)	Frequency	Time to Transpose (Months)	Frequency	Time to Transpose (Months)	Frequency
0.00	298	0.00	427				
0.50	50	3.50	25	15.50	60	21.00	35
1.00	446	5.00	25	16.00	25	21.50	10
1.50	50	6.00	25	16.50	10	22.00	22
2.00	250	6.50	50	17.00	74	24.00	385
2.50	50	7.00	30	18.00	204	24.50	30
3.00	213	8.00	45	18.50	15	25.00	447
3.50	50	9.00	65	19.00	150	25.50	25
4.00	125	9.50	25	20.00	48	26.00	65
4.50	2	10.00	50	20.50	10	27.00	25
5.00	125	10.50	45	21.00	10	27.50	25
6.00	1071	11.00	60	22.50	11	28.00	25
6.50	233	11.50	25	23.00	25	29.00	10
7.00	223	12.00	140	24.00	48	32.00	4
8.00	259	13.00	175	25.00	120	35.00	25
9.00	195	13.50	10	26.00	15	36.00	109
9.50	95	14.00	96	27.00	25	36.50	15
10.00	235	15.00	20	32.00	10	37.00	30
10.50	39	15.50	25	36.00	30	38.00	15
11.00	215	16.50	35	36.50	15	40.00	8
12.00	680	17.00	35	41.50	15	44.00	5
12.50	100	18.00	150	44.00	4	51.00	15
13.00	250	19.00	35			56.00	4
13.50	50	19.50	50			65.00	15
14.00	220	20.00	112			80.00	1
15.00	85	20.50	15				

Table 4.2: Distribution of Number of Recitals

Amendments		New Directives		Amendments		New Directives	
Number of Recitals	Frequency	Number of Recitals	Frequency				
1	25	3	25			33	75
2	25	4	75			34	155
3	570	5	100			36	25
4	596	6	75			37	25
5	600	7	50			38	2
6	625	9	25			40	50
7	501	10	75			41	25
8	623	11	100			42	75
9	450	12	153			44	50
10	636	13	63			45	25
11	550	14	100			48	25
12	275	15	100			49	25
13	125	16	225			51	25
14	57	17	175			60	25
15	250	18	122			61	3
16	150	19	104			67	25
17	25	20	98			72	25
18	25	21	123			73	2
19	25	22	50			85	25
20	50	23	100			33	75
21	50	24	100				
22	50	25	75				
23	100	26	72				
24	25	29	98				
26	100	30	50				
36	25	31	100				
		32	25				

The time to transpose varies greatly, from immediate action required (0 months) up to 80 months. Most directives are required to be transposed between six and 18 months, with the average length of time being just shy of 12 months. There is an equally

wide spread in the number of recitals, from a low of one to a high of 85, though most are concentrated between six and 17, with the average being just 13.5 recitals.

Figure 4.1: Distribution of Directives by Issuing Authority

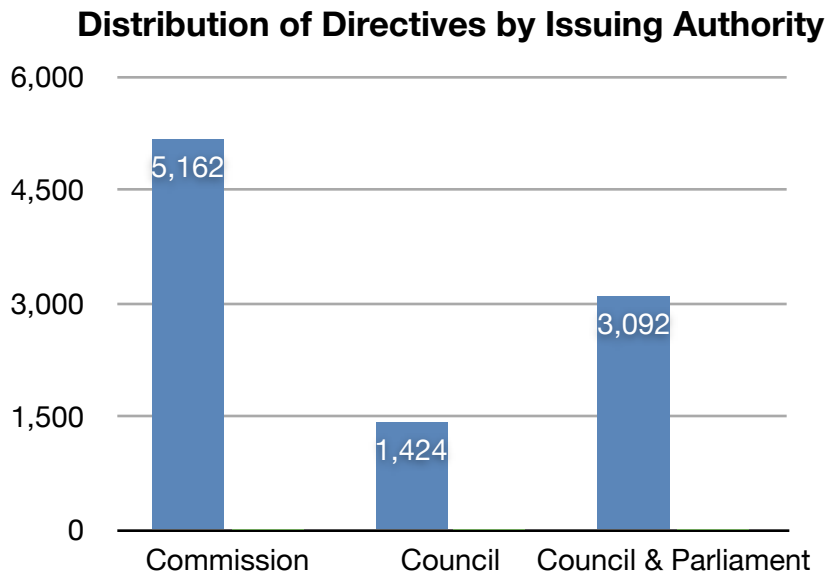
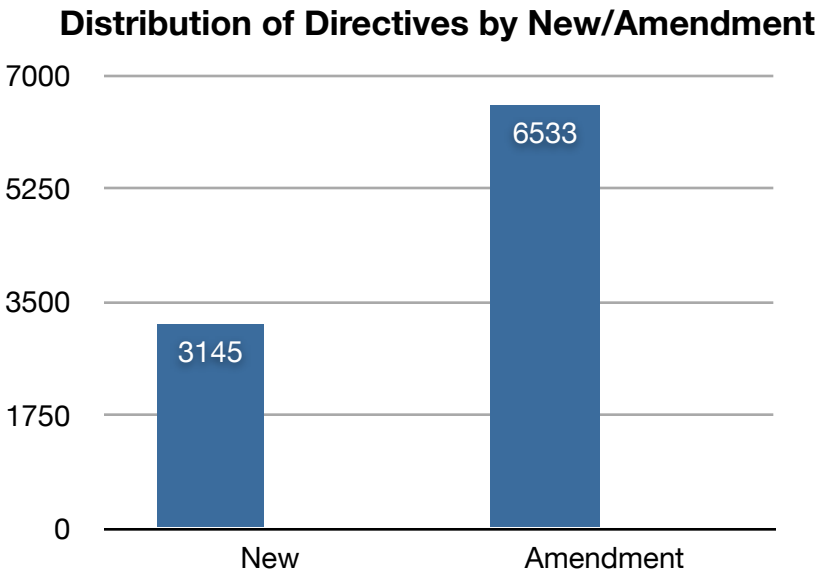


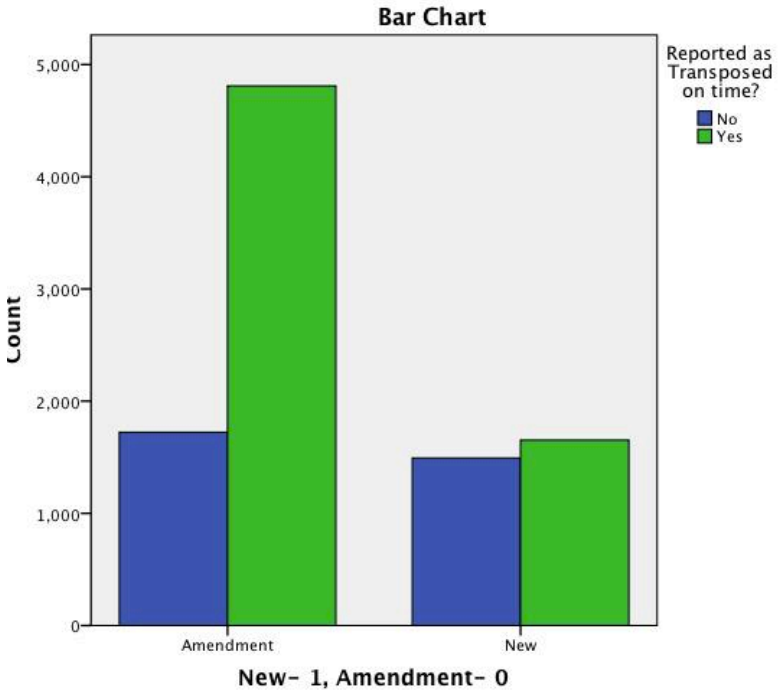
Figure 4.2 Distribution of Directives by New/Amendment



Who issues the directives is broken out rather unevenly. The Commission wrote over 53% of the directives that were issued during this time period, while the Council was responsible for just under 15%, and the Council and Parliament working together issued the remaining 32% of the directives. Only 1/3 of the directives were new while 2/3 were amendments to previously issued directives.

We can further examine the distributions by creating more comparative contingency tables. This will show how the different variables are broken out against the dependent variable of whether the directive was transposed on time.

Figure 4.3: Distribution of Reported as Transposed on Time and New/Amendment



Of the 6533 amendments, 4810 of them were transposed on time, making it an average of 73.6% of amendments that were transposed by the deadline. New directives, on the other hand, were only transposed on time 54.8% of the time.

Table 4.3: Contingency Table: Issuing Authority, New/Amendment, Transposed on Time

				Reported as Transposed on time?		
				No	**Yes**	**Total**
Commission	New- 1, Amendment- 0	Amendment	Count	1032	3674	4706
			% within New- 1, Amendment- 0	21.9%	78.1%	100.0%
		New	Count	216	240	456
			% within New- 1, Amendment- 0	47.4%	52.6%	100.0%
		Total	Count	1248	3914	5162
			% within New- 1, Amendment- 0	24.2%	75.8%	100.0%
Council	New- 1, Amendment- 0	Amendment	Count	272	419	691
			% within New- 1, Amendment- 0	39.4%	60.6%	100.0%
		New	Count	312	421	733
			% within New- 1, Amendment- 0	42.6%	57.4%	100.0%
	Total		Count	584	840	1424
			% within New- 1, Amendment- 0	41.0%	59.0%	100.0%
Council and Parliament	New- 1, Amendment- 0	Amendment	Count	419	717	1136
			% within New- 1, Amendment- 0	36.9%	63.1%	100.0%
		New	Count	965	991	1956
			% within New- 1, Amendment- 0	49.3%	50.7%	100.0%
	Total		Count	1384	1708	3092
			% within New- 1, Amendment- 0	44.8%	55.2%	100.0%

The Commission has the best transposition record, with 75.8% of Commission directives being transposed on time. Council directives are transposed by the deadline only 58.9% of the time, while Council & Parliament issued directives are transposed on time 55.2% of the time.

Both the Commission directives and amendments are transposed on time more than 70% of the time. The figures below show how Commission and amendments covary.

Figure 4.4: Distribution of Commission New vs. Amendments

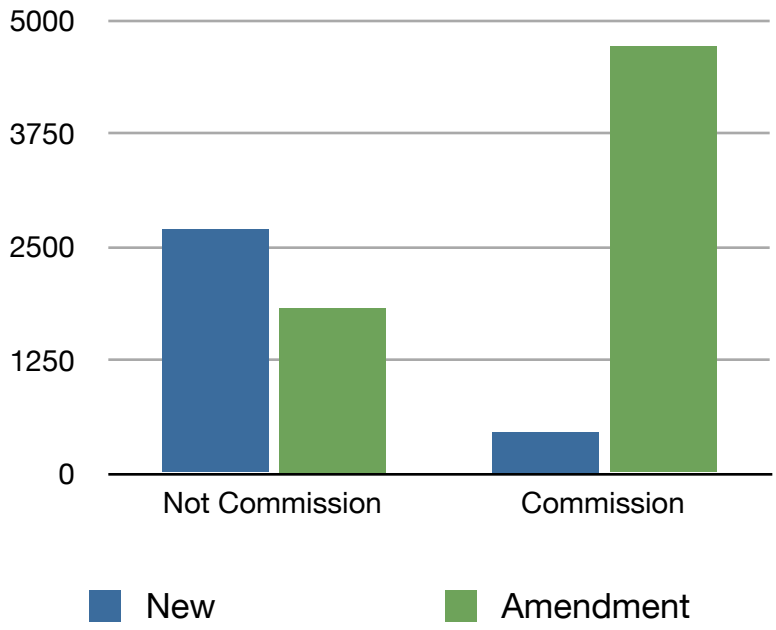
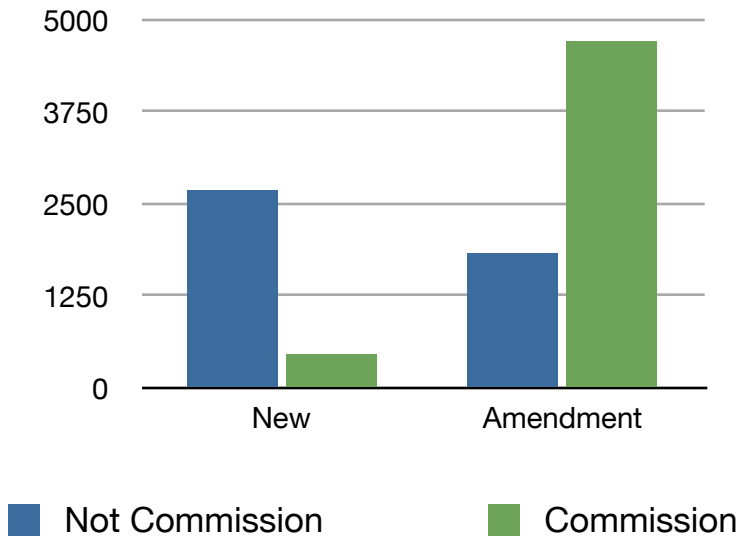


Figure 4.5 Distribution of New/Amendments vs. Commission



Of the 5162 directives issued by the Commission, 4706 of them were amendments, 91.2% of their work. The Commission's work is very uneven, issuing almost all amendments and very few new directives. Likewise, of all 6533 amendments, 4706 of them were issued by the Commission, or 72%.

Logistic Regression

Since this is a theory-testing section, testing the hypothesis that directive-based variables account for different transposition rates among the sectors, I ran all four of my independent variables simultaneously, rather than in a stepwise fashion that is more suited to exploratory research. "Exploratory testing makes no a-priori assumptions regarding the relationships between the variables, thus the goal is to discover relationships" (Connor). However, I predict that each of these variables will have an

effect on transposition rates, and therefore including them all up front is a more proper means for theory testing. The results of the overall logistic regression are given in Table 4.4.

Table 4.4 Overall Logistic Regression

Parameter Estimates							
Parameter			95% Wald Confidence Interval		Hypothesis Test		
	B	Std. Error	Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-1.437	.0883	-1.610	-1.264	264.963	1	.000
[Commission_Council_CP=0]	-.229	.0617	-.350	-.108	13.757	1	.000
[Commission_Council_CP=1]	.190	.0705	.052	.328	7.286	1	.007
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
[New_Amendment=0]	-.088	.0634	-.212	.037	1.903	1	.168
[New_Amendment=1]	0[a]	.	.	.	.	.	.
Time_Transpose_Months	.043	.0029	.038	.049	221.966	1	.000
Number_of_Recitals	.024	.0025	.019	.029	92.271	1	.000
(Scale)	1[b]						
Dependent Variable: Reported as Transposed on time?							
Model: (Intercept), Commission_Council_CP, New_Amendment, Time_Transpose_Months, Number_of_Recitals							
a. Set to zero because this parameter is redundant.							
b. Fixed at the displayed value.							

The overall model shows that all but one variable are significant to explaining transposition rates. We can see from the sign of the coefficients that Commission (Commission_Council_CP=0) has a speeding up effect, as does Council and Parliament together (Commission_Council_CP=2, the intercept). Council directives overall have a slowing down effect (Commission_Council_CP=1), as do the number of recitals and the

time to transpose. Amendments, in the overall model, do not appear to be a statistically significant variable.

However, as we noticed in Figures 4.4 and 4.5 above, Commission and amendments are strongly linked. Most of the Commission's work is amendments, and most amendments are issued by the Commission. This suggests that there will be a strong interaction effect. That is, the effect of the Commission on the probability of transposing on time likely depends on whether the directive is an amendment. We can see this interaction effect by conducting a logistic regression using interaction terms.

Table 4.5 Logistic Regression of Interaction Terms

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-1.510	0.1014	-1.709	-1.311	221.756	1	0.000
Commission * Amendment	-0.303	0.0770	-0.454	-0.152	15.508	1	0.000
Commission * New	0.488	0.1136	0.265	0.711	18.472	1	0.000
Council * Amendment	0.689	0.1096	0.475	0.904	39.555	1	0.000
Council * New	-0.284	0.0926	-0.465	-0.102	9.400	1	0.002
CP * Amendment	-0.081	0.0857	-0.249	0.087	0.890	1	0.346
CP* New	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.019	0.0042	0.011	0.027	20.558	1	0.000
Time_Transpose_Months	0.041	0.0055	0.031	0.052	56.840	1	0.000
Time * Number_Recitals	0.001	0.0003	6.85E-06	0.001	3.945	1	0.047
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

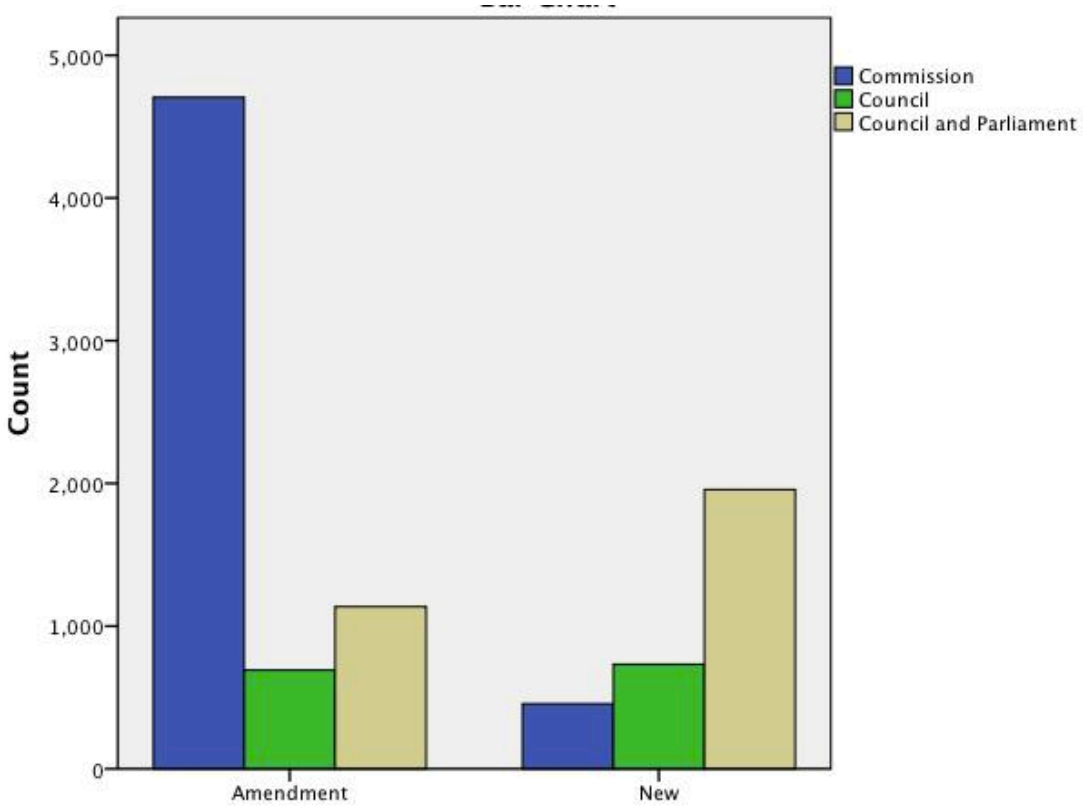
Model: (Intercept), CommAmend, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

The interaction effects, except for Council and Parliament * Amendment, are all statistically significant. I then conducted a Chi Square analysis to to test the association between Issuing Authority and New/Amendment. The results were that there is a highly statistically significant (at .000) relationship between the two. This relationship can be seen in Figure 4.6 below.

Figure 4.6: Distribution of Issuing Authority and New/Amendment



This chart shows that there is a significantly different distribution between Issuing Authority and New/Amendment. This association suggests that a better way to look at the model is to split the data into two discrete models. As such, for the remainder of the

analyses, I have divided the analyses into two groups. First, I will look at directives which are amendments only, and examine the effects of Issuing Authority, time to transpose, number of recitals and the interaction of time to transpose and number of recitals. Second, I will examine those same variables against new directives. This way each variable can be examined and we can glean important insights about the differences between new directives and amendments.

Further, Table 4.5 also shows that the interaction of Number of Recitals and Time to Transpose (Months) is also a significant interaction. As was mentioned above, it is hypothesized that there is a correlation between the number of recitals and the amount of time given to transpose a directive. The results of the correlation analysis are that all were significant at the .01 level. We do not see evidence of any multicollinearity between these two variables because the magnitude of the Pearson correlation is not larger than .9. As such, this interaction term will also be included for all of the following analyses.

Amendments

The logistic regression for Issuing Authority, time to transpose, number of recitals, and time-recital interaction within directives that were amendments is shown below in Table 4.6.

Table 4.6: Logistic Regression:Amendments by Issuing Authority, Time to Transpose (Months), Number of Recitals

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-0.608	0.1366	-0.876	-0.340	19.820	1	0.000
[Commission_Council_CP=0]	-0.360	0.0857	-0.528	-0.192	17.636	1	0.000
[Commission_Council_CP=1]	0.372	0.1184	0.140	0.604	9.857	1	0.002
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.061	0.0107	-0.082	-0.040	32.568	1	0.000
Time_Transpose_Months	-0.019	0.0091	-0.037	-0.001	4.281	1	0.039
Time * Recitals	0.005	0.0007	0.004	0.006	51.586	1	0.000
(Scale)	1[b]						
Dependent Variable: Reported as Transposed on time? Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN							
a. Set to zero because this parameter is redundant.							
b. Fixed at the displayed value.							
c. New- 1, Amendment- 0 = Amendment							

All of the variables are highly significant. To determine just how much of an effect each of these variables has at different values, I use the probability of the logistic curve, which "relates the independent variable, X, to the rolling mean of the (dependent variable), P ($\bar{Y}$)" (Brannick). This equation is written as:

$$P = \frac{1}{1 + e^{-(a+bX)}}$$

The larger the number in the exponent, the larger the denominator will be, sending P closer to 0, indicating a lesser likelihood for transposing on time. Conversely, the smaller the number in the exponent, the smaller the denominator will be, sending P closer to 1, indicating a greater likelihood of transposition.

To determine the probability of transposition, I calculate $e^{-(-.608-.36}$ (Commission)+.372(Council)-.019(Time)-.061(Recitals)+.005(Time*Recitals)). To calculate the effect of just the Commission:

e-(-.608-.36(1)+.372(0)-.019(0)-.061(0)+.005(0) =

e-(-.608-.36) =

e-(-.968) = 2.633

Substituting 2.633 into the equation above we get 1/1+2.633, which is .275. Holding all other factors constant, accounting just for Commission, there is a 28 percent chance that an amendment issued by the Commission will be delayed. One minus the probability gives the probability that a directive will be transposed on time, or 72%.

To determine the probability of the Council transposing an amendment on time, we follow the same procedure, but substitute a 0 for Commission and a 1 for Council.

$e^{-(-.608-.360(0)+.372(1)-.019(0)-.016(0)+.005(0)}$ =

$e^{-(-.608+.372)}$ = -.236

$e^{-(-.236)} = 1.266$

Substituting 1.266 into the equation results in .44, or a 44% probability that directives issued by the Council, holding all other variables constant, will be delayed. One minus probability of delay shows that probability of Council amendments being transposed on time is 56%.

Numerous permutations are possible for each issuing agency, given differing numbers of months to transpose, differing number of recitals, and the interaction of those two terms. To see how the probability changes given differing issuing authorities I have calculated those probabilities below.

Table 4.7: Transposition Probabilities by Issuing Authority, Amendments

	e-	value of e	1/1+e	Probability of Transposing on Time
Commission = 1	-0.914	2.49428	0.28618	71.38%
Council = 1	-0.236	1.26617	0.44127	55.87%
Council & Parliament = 1	-0.608	1.83675	0.35252	64.75%

As we can see, the Commission has the best probability of transposing amendments on time at 71%, followed by the Council and Parliament at 65%, and the Council at 56%.

The qualitative variables, on the other hand, may not be looked at independently. The interaction of the two was significant. When overall time to transpose and recitals are taken together, the result is to create another positive integer in the denominator of the equation. Depending on how large or small that resulting term, especially compared to the magnitude of the other terms, it may have a significant effect on the probability of

transposition. First, in Table 4.8 I will illustrate the transposition probabilities at the mean values. Table 4.9 will then illustrate how transposition probabilities change when the number of months and number of recitals change.

Table 4.8 Transposition Probabilities at Mean Values, Amendments

	e-	value of e	1/1+e	Probability of Transposing on Time
Commission * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-1.2243	3.402	0.227	77.28%
Council * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-0.5463	1.727	0.367	63.33%
C&P * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-0.918	2.505	0.285	71.47%

Table 4.9 Transposition Probabilities at Different Values, Amendments

	e^{-}	value of e	1/1+e	Probability of Transposing on Time
Commission * Time (1) * Recital (9.17) * Time-Recital (9.17)	-1.44652	4.24830	0.190538	80.95%
Council * Time (1) * Recital (9.17) * Time-Recital (9.17)	-0.76852	2.15657	0.316799	68.32%
C&P * Time (1) * Recital (9.17) * Time-Recital (9.17)	-1.14052	3.1284	0.242225	75.78%
Commission * Time (8.98) * Recital (1) * Time-Recital (8.98)	-1.10072	3.0063	0.249605	75.04%
Council * Time (8.98) * Recital (1) * Time-Recital (8.98)	-0.42272	1.52611	0.395866	60.41%
C&P * Time (8.98) * Recital (1) * Time-Recital (8.98)	-0.79472	2.21382	0.311156	68.88%
Commission * Time (24) * Recital (9.17) * Time-Recital (220.08)	-0.82897	2.29096	0.303863	69.61%
Council * Time (24) * Recital (9.17) * Time-Recital (220.08)	-0.15097	1.16296	0.462329	53.77%
C&P * Time (24) * Recital (9.17) * Time-Recital (220.08)	-0.52297	1.68703	0.372158	62.78%
Commission * Time (8.98) * Recital (20) * Time-Recital (179.6)	-1.40662	4.082134	0.1967677	80.32%
Council * Time (8.98) * Recital (20) * Time-Recital (179.6)	-0.72862	2.072219	0.3254976	67.45%
C&P * Time (8.98) * Recital (20) * Time-Recital (179.6)	-1.10062	3.006029	0.2496237	75.04%

For amendments, the relationship between time and recitals is important. Directives with less time to transpose, but with comparatively more recitals will be transposed better than average. But those directives with few recitals will suffer in transposition, regardless of whether or not there is a long time to transpose. This perhaps indicates that the recitals provide important instructions or background information that helps the transposition process.

New Directives

The logistic regression for Issuing Authority, time to transpose, number of recitals, and recitals-time interaction within directives that were new is shown below in Table 4.10.

Table 4.10: Logistic Regression: New Directives by Issuing authority, Time to Transpose (Months), Number of Recitals

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-2.437	0.1596	-2.750	-2.124	232.964	1	0.000
[Commission_Council_CP=0]	0.604	0.1216	0.365	0.842	24.632	1	0.000
[Commission_Council_CP=1]	-0.303	0.0946	-0.489	-0.118	10.275	1	0.001
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.055	0.0061	0.043	0.067	82.556	1	0.000
Time_Transpose_Months	0.096	0.0086	0.079	0.113	123.143	1	0.000
TN	-0.002	0.0003	-0.002	-0.001	21.364	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?
Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New

For new directives, all of the variables are highly significant for explaining transposition. With the exception of Council and Parliament-issued directives, all of the signs on the coefficients are the opposite of those found for amendments. For new directives, the Council has a speeding up effect on transposition, while the Commission has a delaying effect. Number of recitals and time to transpose also have delaying effects. The interaction of time and recitals has such a small coefficient, that it is unlikely to have

a very strong effect. Using the same probability equation above, I calculate the probability of transposition for the mean value of the independent variables. The results are below in Table 4.11.

Table 4.11: Transposition Probabilities at Mean Values, New Directives

	e-	value of e	1/1+e	Probability of Transposing on Time
Commission * Time (17.55) * Recital (23.1) * Time-Recital (405.41)	0.3115	0.7324	0.5772	42.28%
Council * Time (17.55) * Recital (23.1) * Time-Recital (405.41)	-0.5955	1.8140	0.3554	64.46%
C&P * Time (17.55) * Recital (23.1) * Time-Recital (405.41)	-0.2925	1.3398	0.4274	57.26%

This data appears to be in line with expectations. New directives are not expected to be transposed as well as amendments, and the logistic regression showed that we should expect the Council to transpose directives at a better rate than either the Council & Parliament or the Commission. Table 4.12 shows the effect of changing the value of the months to transpose variable and the number of recitals variables.

Table 4.12 Transposition Probabilities for Issuing Authority at Differing Values, New Directives

	e-	value of e	1/1+e	Probability of Transposing on Time
Commission * Time (6) * Recital (23.1) * Time-Recital (138.6)	-0.26370	1.30174	0.43445	56.55%
Council * Time (6) * Recital (23.1) * Time-Recital (138.6)	-1.17070	3.22425	0.23673	76.33%
C&P * Time (6) * Recital (23.1) * Time-Recital (138.6)	-0.86770	2.38143	0.29573	70.43%
Commission * Time (17.55) * Recital (8) * Time-Recital (140.4)	0.01100	0.98906	0.50275	49.73%
Council * Time (17.55) * Recital (8) * Time-Recital (140.4)	-0.89600	2.44978	0.28987	71.01%
C&P * Time (17.55) * Recital (8) * Time-Recital (140.4)	-0.59300	1.80941	0.35595	64.41%
Commission * Time (36) * Recital (23.1) * Time-Recital (831.6)	1.23030	0.29220	0.77387	22.61%
Council * Time (36) * Recital (23.1) * Time-Recital (831.6)	0.32330	0.72376	0.58013	41.99%
C&P * Time (36) * Recital (23.1) * Time-Recital (831.6)	0.62630	0.53457	0.65165	34.83%
Commission * Time (17.55) * Recital (40) * Time-Recital (702)	0.6478	0.5232	0.6565	34.35%
Council * Time (17.55) * Recital (40) * Time-Recital (702)	-0.2592	1.2959	0.4356	56.44%
C&P * Time (17.55) * Recital (40) * Time-Recital (702)	0.0438	0.9571	0.5109	48.91%

For new directives the relationship is more straightforward than it was for amendments.

For new directives, the less time available for transposition and the fewer the number of

recitals, the better the transposition rate is likely to be. Directives that have higher numbers of recitals and longer transposition times appear more likely to have poor transposition. Time to transpose is especially important. Even a mean time with a high number of recitals is transposed better than a high time to transpose and a mean level of recitals. This perhaps indicates that the simpler a new directive is, as indicated by length of time to transpose and number of recitals, the better its chances of timely transposition. This is opposite of what we found for amendments where more recitals helped the transposition probabilities. The reasons for the different effects between new directives and amendments deserves a more in-depth inquiry.

Sector Data Analysis

So far I have only examined the composite transposition data. I found in the previous chapter that there are clear differences in transposition rates between the different sectors. The next logical step is to take these logistic regressions and probability analyses and apply them across the different sectors to see if the independent variables effect each of the sectors in the same way as the overall data. Like for the overall data, this data will be presented in two sections, first dealing with directives that are amendments, then dealing with those that are new directives.

Amendments

First I will provide a contingency table to lay the groundwork for how the amendments are divided out between the Commission, the Council, and the Council and Parliament.

Table 4.13: Contingency Table: Sector, and Issuing Authority, Amendments

			Commission-0, Council - 1, C & P- 2			
			Commission	Council	Council and Parliament	Total
Sector	Employment	Count	0	20	99	119
		% within Sector	.0%	16.8%	83.2%	100.0%
	Energy & Transport	Count	257	13	137	407
		% within Sector	63.1%	3.2%	33.7%	100.0%
	Enterprise	Count	1125	25	400	1550
		% within Sector	72.6%	1.6%	25.8%	100.0%
	Environment	Count	150	50	150	350
		% within Sector	42.9%	14.3%	42.9%	100.0%
	FJS	Count	0	50	0	50
		% within Sector	.0%	100.0%	.0%	100.0%
	Health & Consumers	Count	3074	175	100	3349
		% within Sector	91.8%	5.2%	3.0%	100.0%
	Internal Market	Count	75	100	250	425
		% within Sector	17.6%	23.5%	58.8%	100.0%
	Tax & Customs	Count	25	258	0	283
		% within Sector	8.8%	91.2%	.0%	100.0%
Total		Count	4706	691	1136	6533
		% within Sector	72.0%	10.6%	17.4%	100.0%

There is not an even distribution of issuing authority among the different sectors. Most sectors did receive amendments from all three issuing agencies, though not all. The

Commission did not issue any directives that were amendments in Employment, and the Council and Parliament did not issue any amendments in Tax & Customs. There were only 50 amendments issued in FJS, and all of them were issued by the Council. Health & Consumers overwhelmingly received amendment directives from the Commission. Overall the Commission issued the greatest number of directives in Energy & Transport, Enterprise, and Health & Consumers. The Council issued the most amendments for FJS and Tax & Customs, and Council & Parliament issued the most directives in Employment and Internal Market. Only Environment saw a fairly even split between amendments issued by the Commission and Council and Parliament, each at about 43%, with the remaining 14% being issued by the Council.

If the findings from the overall data hold when broken down by sector, I would expect to see that an increasing number of recitals and higher times to transpose would benefit transposition probabilities. With regard to issuing authority, Commission and Council and Parliament should have a speeding up effect, while Council-issued amendments should increase the probability of delay.

Table 4.14 Logistic Regression: Amendment and Sector

Sector	Parameter	B	Significance	Percentage of directives
Employment	Intercept	3.216	0.501	83.2
	Commission	n/a		-
	Council	-1.119	0.757	16.8
	Time_Transpose_Months	-0.097	0.484	
	Number_of_Recitals	-0.547	0.138	
	Time * Recitals	0.016	0.128	
Energy & Transport	**Intercept**	**-4.913**	**0.000**	**33.7**
	Commission	1.166	0.027	63.1
	Council	-19.855	0.999	3.2
	Time_Transpose_Months	**0.121**	**0.020**	
	Number_of_Recitals	**0.468**	**0.000**	
	Time * Recitals	**-0.014**	**0.000**	
Enterprise	**Intercept**	**-1.567**	**0.000**	**25.8**
	Commission	0.332	0.064	72.6
	Council	-21.110	0.999	1.6
	Time_Transpose_Months	-0.039	0.158	
	Number_of_Recitals	0.046	0.334	
	Time * Recitals	0.005	0.105	
Environment	**Intercept**	**10.168**	**0.000**	**42.9**
	Commission	**-0.879**	**0.001**	**42.9**
	Council	**-6.749**	**0.000**	**14.3**
	Time_Transpose_Months	**-0.568**	**0.000**	
	Number_of_Recitals	**-0.639**	**0.000**	
	Time * Recitals	**0.037**	**0.000**	
FJS	Intercept	0.788	0.178	100
	Commission	n/a		-
	Council	(intercept)		-
	Time_Transpose_Months	0.030	0.856	
	Number_of_Recitals	-0.21	0.897	
	Time * Recitals	(intercept)		
Health & Consumers	Intercept	-0.414	0.184	3
	Commission	**-0.823**	**0.001**	**91.8**
	Council	**-0.714**	**0.020**	**5.2**
	Time_Transpose_Months	0.021	0.293	
	Number_of_Recitals	**-0.063**	**0.003**	
	Time * Recitals	0.002	0.339	

Sector	Parameter	B	Significance	Percentage of directives
Internal Market	**Intercept**	**-0.2831**	**0.000**	**58.8**
	Commission	**2.202**	**0.000**	**17.6**
	Council	**1.698**	**0.001**	**23.5**
	Time_Transpose_Months	**0.060**	**0.047**	
	Number_of_Recitals	-0.012	0.702	
	Time * Recitals	**0.004**	**0.040**	
Tax & Customs	Intercept	0.170	0.631	91.2
	Commission	0.599	0.199	8.8
	Council	n/a		-
	Time_Transpose_Months	-0.102	0.060	
	Number_of_Recitals	-0.011	0.796	
	Time * Recitals	0.008	0.074	

Only about half of the time is issuing authority a significant factor for amendments. Number of recitals, which was significant in the overall model is only significant in three sectors (Energy, Environment, Health & Consumers), as was time to transpose (Energy, Environment, Internal Market). Only in Internal Market and Environment was the interaction significant.

Focusing on the three sectors that we found deviated from the average in Chapter III, Health & Consumers shows a tendency for timely transposition in part because all of the significant variables have a negative coefficient, helping to bring the probability closer to 1. Also, Health & Consumers amendments have a relatively high mean number of recitals, which further boosts the transposition probability. Running the probabilities of all the variables held at the mean, compared to all variables held at the mean with the exception of number of recitals, which I set to the maximum found in this sector at 26, we see an increase in the probability of timely transposition. In this sector, because nearly

all directives were issued by the Commission, I only examine the probabilities as related to Commission-issued directives.

Table 4.15 Health & Consumers Probabilities, Varying Recitals, Amendments

Health & Consumers	e	value of e	1/1+e	Probability of Transposing on Time
Commission * MeanRecitals (9.28)*MeanTime (8.23) *MeanTimeRecitals (76.37)	-1.4961	4.46411	0.183012401	81.70%
Commission * HighRecitals(26) *MeanTime (8.23) *TimeRecitals (213.98)	-2.2742	9.72024	0.09328152	90.67%

In Internal Market, both the issuing authority and the time to transpose (as well as the interaction of time and recitals) were statistically significant variables, but the Commission and Council had the greatest overall delaying effect, due to their high positive coefficients. To see how the probabilities for transposition change with varying inputs, the Table 4.16 shows the different probabilities for transposition for Council and Parliament and Council with average means for the three quantitative variables.

Table 4.16 Internal Market Probabilities, Council and Parliament vs Council, Amendments

	e	value of e	1/1+e	Probability of Transposing on Time
C&P * MeanRecitals (9.76) * MeanTime (9.86) * MeanTimeRecitals (96.23)	0.5763	0.5620	0.6402	35.98%
Council * MeanRecitals (9.76) * MeanTime (9.86) * MeanTimeRecitals (96.23)	2.2743	0.1029	0.9067	9.33%

As anticipated, Council has a significant effect toward decreasing the probability of transposition. This shows that who issues the directive has a very strong effect for

Internal Market directives. Likewise, when the time allowed to transpose is set to the maximum found in that field, chances of transposition are negligible as seen in Table 4.17.

Table 4.17 Internal Market Transposition Probabilities Varying Time to Transpose, Amendments

	e	value of e	1/1+e	Probability of Transposing on Time
C&P * MeanRecitals (9.76) * HighTime (41.5) * TimeRecitals (405.04)	3.70994	0.024479	0.9761	2.39%
Council * MeanRecitals (9.76) * HighTime (41.5) * TimeRecitals (405.04)	5.40794	0.004481	0.9955	0.45%

Increasing the number of recitals, which does have a positive effect on transposition, though insignificant, does not help transposition due to the interaction effect with time to transpose. Indeed, because of this interaction effect, the probability decreases even further.

Table 4.18 Internal Market Transposition Probabilities Varying Time to Transpose and Number of Recitals, Amendments

	e	value of e	1/1+e	Probability of Transposing on Time
C&P * HighRecitals (36) * HighTime (41.5) * TimeRecitals (1494)	7.7509	0.000430	0.9996	0.04%
Council * HighRecitals (36) * HighTime (41.5) * TimeRecitals (1494)	9.4489	0.000079	0.9999	0.01%

FJS, on the other hand, did not have any variables that were significant for the transposition of amendments, though amendments were a small share of the FJS sector, and all were issued by the Council and Parliament.

New Directives

It was shown above that there are distinct differences in the factors that effect transposition between new directives and amendments. For Commission-issued amendments, there is an overall model speeding up effect but with new directives, issuance by the Commission increases the likelihood for delay. Conversely with the Council, it has a speeding up effect on the transposition in the overall model of new directives but is more likely to create delay with amendments. Interestingly, the effect of time to transpose and number of recitals are opposite in amendments versus new directives.

How do these factors play out for new directives when broken out by sector? Table 4.19 shows the breakdown of how the new directives were issued by sector.

Table 4.19: Contingency Table: Sector and Issuing Authority, New Directives

			Commission-0, Council - 1, C & P- 2			
			Commission	Council	Council and Parliament	Total
Sector	Employment	Count	31	73	100	204
		% within Sector	15.2%	35.8%	49.0%	100.0%
	Energy & Transport	Count	0	125	588	713
		% within Sector	.0%	17.5%	82.5%	100.0%
	Enterprise	Count	125	0	280	405
		% within Sector	30.9%	.0%	69.1%	100.0%
	Environment	Count	0	0	311	311
		% within Sector	.0%	.0%	100.0%	100.0%
	FJS	Count	0	285	50	335
		% within Sector	.0%	85.1%	14.9%	100.0%
	Health & Consumers	Count	200	125	150	475
		% within Sector	42.1%	26.3%	31.6%	100.0%
	Internal Market	Count	100	0	477	577
		% within Sector	17.3%	.0%	82.7%	100.0%
	Tax & Customs	Count	0	125	0	125
		% within Sector	.0%	100.0%	.0%	100.0%
Total		Count	456	733	1956	3145
		% within Sector	14.5%	23.3%	62.2%	100.0%

There is a bit more evenness to the way the new directives are issued compared to the strong delineations found in amendments, but they are still fairly clustered. There are again some sectors where the directives were issued by only one authority -- Environmental directives were issued 100% by the Council and Parliament, while Tax & Custom directives were all issued by the Council. Overall, Council and Parliament issued 62% of the new directives, while the Commission accounted for just under 15%.

Recall that the overall data for new directives showed that all six independent variables were significant factors in determining transposition. When I break this out by sector we see that the sign and significance is more closely in line with what was found for the overall model.

Table 4.20: Logistic Regression: New Directives and Sector

Sector	Parameter	B	Significance	Percentage of directives
Employment	Intercept	-0.611	0.655	49
	Commission	-0.320	0.542	15
	Council	**0.929**	**0.012**	**35.8**
	Time_Transpose_Months	0.036	0.481	
	Number_of_Recitals	-0.044	0.376	
	Time * Recitals	3.97E-05	0.984	
Energy & Transport	**Intercept**	**-4.183**	**0.000**	**82.5**
	Commission	**n/a**		**-**
	Council	**-0.751**	**0.002**	**17.5**
	Time_Transpose_Months	**0.158**	**0.000**	
	Number_of_Recitals	**0.163**	**0.000**	
	Time * Recitals	**-0.005**	**0.005**	
Enterprise	**Intercept**	**-2.658**	**0.000**	**69.1**
	Commission	0.437	0.088	30.9
	Council	n/a		-
	Time_Transpose_Months	**0.053**	**0.036**	
	Number_of_Recitals	**0.123**	**0.002**	
	Time * Recitals	**-0.004**	**0.023**	
Environment	**Intercept**	**-4.173**	**0.000**	**100**
	Commission	n/a		
	Council	n/a		
	Time_Transpose_Months	**0.162**	**0.000**	
	Number_of_Recitals	**0.157**	**0.001**	
	Time * Recitals	**-0.005**	**0.007**	
FJS	Intercept	-0.698	0.691	14.9
	Commission	n/a		-
	Council	**-0.729**	**0.044**	**85.1**
	Time_Transpose_Months	0.053	0.492	
	Number_of_Recitals	0.061	0.295	
	Time * Recitals	-0.002	0.520	

Sector	Parameter	B	Significance	Percentage of directives
Health & Consumers	**Intercept**	**-3.649**	**0.000**	**31.6**
	Commission	**1.673**	**0.000**	**42.1**
	Council	-0.184	0.504	26.3
	Time_Transpose_Months	**0.157**	**0.000**	
	Number_of_Recitals	**0.064**	**0.021**	
	Time * Recitals	-0.001	0.385	
Internal Market	**Intercept**	**-3.699**	**0.000**	**82.7**
	Commission	**0.682**	**0.022**	**17.3**
	Council	n/a		-
	Time_Transpose_Months	**0.212**	**0.000**	
	Number_of_Recitals	**0.074**	**0.000**	
	Time * Recitals	**-0.004**	**0.000**	
Tax & Customs	**Intercept**	**-20.665**	**0.998**	**100**
	Commission	n/a		-
	Council	(intercept)		-
	Time_Transpose_Months	-0.452	1.0	
	Number_of_Recitals	-0.165	0.999	
	Time * Recitals	0.043	-	

For most sectors, the sign of the coefficient is the same as that found in the overall model for all variables. For most sectors, we see that the number of recitals and the time to transpose are delaying factors, and usually significantly so. As I did above for amendments, I will conduct probabilities to see how changing factors changes the probable outcomes for Health & Consumers and Internal Market.

Table 4.21 Health & Consumers Probabilities, Council and Parliament vs Commission, New Directives

Health & Consumers	e	value of e	1/1+e	Probability of Transposing on Time
C&P * MeanTime (12.77) *MeanRecital (18.53) * TimeRecital(236.63)	-0.69482	2.00335	0.33296	66.70%
Commission * MeanTime (12.77) *MeanRecital (18.53) * TimeRecital(236.63)	0.97818	0.37599	0.72675	27.33%

Commission has a significant delaying effect. We can see how much, if any, moderating effect time to transpose and number of recitals have on the transposition probability, though given the negative coefficients in the logistic regression, we should expect to see that transposition likelihood will decrease.

Table 4.22 Health & Consumers Transposition Probabilities Varying Time to Transpose, New Directives

	e	value of e	1/1+e	Probability of Transposing on Time
C&P * HighTime (26) *MeanRecital (18.53) * TimeRecital(481.78)	1.13714	0.3207	0.75715	24.28%
Commission * HighTime (26) *MeanRecital (18.53) * TimeRecital(481.78)	2.81014	0.060197	0.94322	5.68%

Indeed this was what was expected. Likewise, we would expect to see the transposition probability increase as the two delaying quantitative variables decreased in value. In Table 4.23 I examine what happens to transposition probabilities for new Health & Consumers directives with low time to transpose and low recitals.

Table 4.23 Health & Consumers Transposition Probabilities Varying Time to Transpose and Number of Recitals, New Directives

	e	value of e	1/1+e	Probability of Transposing on Time
C&P * LowTime (0) *LowRecital (3) * TimeRecital (0)	-3.457	31.721669	0.03056	96.94%
Commission * LowTime (0) *LowRecital (3) * TimeRecital (0)	-1.784	5.953623	0.14381	85.62%

Using the lowest possible data, with immediate turnaround due on transposition and only three recitals, the probability for transposition of new Health & Consumers directives skyrockets. This suggests that perhaps in this sector the simpler and quicker directives are the higher their likelihood for transposition. Longer more detailed directives will be subject to more delay.

Internal Market also followed the pattern established in the overall model. Though despite over 82% of the directives having a speeding up effect due to being issued by the Council and Parliament, the delaying effects of time to transpose and number of recitals were much greater, due to Internal Market having very high average times to transpose as well as very high number of recitals.

Table 4.24 Internal Market Probabilities, Council and Parliament vs Commission, New Directives

Internal Market	e	value of e	1/1+e	Probability of Transposing on Time
C&P * MeanTime (17.94) *MeanRecital (37.99) * TimeRecital(681.54)	0.18938	0.827472	0.54720	45.28%
Commission * MeanTime (17.94) *MeanRecital (37.99) * TimeRecital(681.54)	0.87138	0.418374	0.70503	29.50%

Council and Parliament has a significantly better transposition rate than Commission, even considering the effect of the slowing down effect of the quantitative variables. The coefficient for Council and Parliament is very high and has a much greater influence.

Table 4.25 Internal Market Transposition Probabilities Varying Time to Transpose, New Directives

	e	value of e	1/1+e	Probability of Transposing on Time
C&P * LowTime (0) *MeanRecital (37.99) * TimeRecital(0)	-0.88774	2.429632	0.29158	70.84%
Commission * LowTime (0)*MeanRecital (37.99) * TimeRecital(0)	-0.20574	1.228434	0.44875	55.13%

Because we know that as time to transpose and number of recitals increases, the probability of transposition decreases, I chose to compute the probability for the lowest possible number of recitals and shortest period of time in order to see how much that would increase the probability of transposition.

Overall, the expectations for the new directives were met more closely than the expectations for the amendments. New directives as broken out by sector were more in

line with the overall model, and the influence of the number of recitals and time to transpose were as expected, with higher number of recitals and longer times to transpose affecting transposition probabilities in a negative way. For amendments, the variables did not translate into clear unwavering measures of transposition probability. The effect of the issuing authority varied from sector to sector, as did the influence of the quantitative variables. More analysis is required to understand these variations.

Country Analysis

The focus of this dissertation is primarily on the role of sectors in transposition. However, I did find in Chapter III that there are significant country differences as well. To examine how country may effect transposition probabilities, I also conducted a logistic regression which included countries as independent variables, so that I could hold constant the effect of country on transposition. As when not accounting for countries, the issuing authority and the quantitative variables are all highly statistically significant variables. In amendments, the countries that are positively significant are Belgium, Denmark, Estonia, Germany, Lithuania, Netherlands, Slovakia, Spain, and Sweden. This corresponds very well with the countries that were found to be significantly positive transposers in Chapter III, but also includes Belgium, Spain, and Sweden, which are new additions. The countries that were found to be significantly negative transposers were Italy and Portugal. Greece, which was found to be a statistically significant poor transposer in Chapter III just missed the .005 cutoff when other factors were considered.

For new directives, only Denmark was a statistically significant positive transposer, while Greece, Italy, Luxembourg and Portugal were all significantly negative.

Amendments

All of the signs on the coefficients for the issuing authorities and the quantitative variables are the same when including countries in the model, though the coefficients themselves have changed. So the directional effect does not change, but the magnitude will.

To conduct a few brief analyses to see the effect of countries on transposition rates, I have chosen to examine one country with a significant positive association with transposition, Lithuania, and one country with a significant negative association with transposition, Portugal.

First, I will show how the main variables appear when including the countries in the regression, but not specifying a particular country in the probability.

Table 4.26 Probabilities for Transposing at the Mean, Amendments

	e-	value of e	1/1+e	Probability of Transposing on Time
Commission *MeanTime (8.98) * MeanRecitals (9.17)* Time*Recitals (82.35)	-1.0739	2.92677	0.254662	74.53%
Council * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-0.2989	1.34837	0.425826	57.42%
C&P * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-0.6929	1.9995	0.333388	66.66%

We can see, compared to Table 4.8, that holding countries constant, the mean transposition time decreases slightly for each issuing authority, indicating that overall country influences are more positive than negative for transposition. The negative effect is slightly larger for Council directives than it is for Commission directives.

Table 4.27 Lithuania, Probability for Transposing at the Mean by Issuing Authority, Amendments

	e-	value of e	1/1+e	Probability of Transposing on Time
Lithuania Commission *MeanTime (8.98) * MeanRecitals (9.17)* Time*Recitals (82.35)	-2.7589	15.7825	0.059586	94.04%
Lithuania Council * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-1.9839	7.27104	0.120904	87.91%
Lithuania C&P * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-2.3779	10.7822	0.0848735	91.51%

As expected, the effect of Lithuania on transposing directives is positive. Directives with the quantitative variables held at the mean, transpose in the same pattern as the overall, but do so at a better rate than average due to factors that have to do with factors specific to Lithuania. Similarly, Portugal does substantially worse as seen in Table 4.28.

Table 4.28 Portugal, Probability for Transposing at the Mean by Issuing Authority, Amendments

	e-	value of e	1/1+e	Probability of Transposing on Time
Portugal Commission *MeanTime (8.98) * MeanRecitals (9.17)* Time*Recitals (82.35)	-0.4389	1.551000	0.3920031	60.80%
Portugal Council * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	0.3361	0.7145516	0.583243	41.68%
Portugal C&P * Time (8.98) * Recital (9.17) * Time-Recital (82.35)	-0.0579	1.059609	0.485529	51.45%

This indicates that country factors, for those countries at a significant level, have specific features that may influence transposition, but country factors do not significantly effect the transposition patterns established.

New Directives

Transposition of new directives also hold the same pattern when countries are considered as when they are not factored into the logistic regression. Council and Council and Parliament still have a positive coefficients, while Commission, Number of Recitals, and Time to Transpose all have negative coefficients. All remain statistically significant.

Table 4.29 Probability for Transposing at the Mean, New Directives

	e-	value of e	1/1+e	Probability of Transposing on Time
Commission * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	0.14023	0.869158	0.535000	46.50%
Council * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	-0.79977	2.22503	0.310075	68.99%
C&P * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	-0.47377	1.60604	0.383724	61.63%

As was the case with amendments, when countries are held constant and included in the regression analysis, the probabilities are in line with what was found when they were not included, though the probability for transposing on time increases slightly.

The probability for transposing new directives was significantly higher for Denmark. This can be seen in Table 4.30 below.

Table 4.30 Denmark, Probability for Transposing at the Mean by Issuing Authority, New Directives

	e-	value of e	1/1+e	Probability of Transposing on Time
Denmark Commission * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	-0.53177	1.70194	0.370104	62.99%
Denmark Council * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	-1.47177	4.35694	0.186674	81.33%
Denmark C&P * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	-1.14577	3.14486	0.241263	75.87%

Of course, given the negative coefficient on Denmark, we would expect the probability of timely transposition to increase, and it does substantially. The opposite effect can be seen with the worst transposer, Portugal.

Table 4.31 Portugal, Probability for Transposing at the Mean by Issuing Authority, New Directives

	e-	value of e	1/1+e	Probability of Transposing on Time
Portugal Commission * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	1.19523	0.30263	0.76768	23.23%
Portugal Council * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	0.25523	0.7747	0.56346	43.65%
Portugal C&P * MeanTime (17.55) * MeanRecital (23.1) * Time-Recital (405.41)	0.58123	0.5592	0.64135	35.86%

We do see that countries do have an effect on the overall transposition rate, though that effect is quite small, and it is to increase the probability of transposition. This can be accounted for by the fact that more countries have positive coefficients in the logistic

regression than negative. An overall positive integer in the exponent of the probability equation given near the beginning of this chapter decreases the size of the denominator, hence increasing probability.

Analysis

My initial hypothesis was that the independent variables chosen would have certain predictable effects on the transposition rates across the sectors. If some sectors are dominated more by some of these independent variables than others, that would be reflected in the transposition rate. New directives are widely thought to be more complex than amendments, so will take longer to transpose, likely leading to delays. The number of recitals is thought to be a good measure of the complexity of a directive, with complex directives also giving rise to delay. The time to transpose a directive is often thought of as being a determining factor such that if the time to transpose is short, it will be difficult to meet the deadline and therefore give rise to delay. However, there are some who suggest that a longer timeline indicates an understanding that the directive is complex, and therefore will require more coordination to transpose, and as such will increase the chances of delay. This also plays into the interaction of the two, where more time and more recitals are thought to lead to delay because of the overall complexity. Who issues the directive is also considered a factor, with Commission directives thought of as generally more technical and less complicated in nature, thus being easier to transpose by a deadline, while Council directives are thought to be more complex and thus will be more frequently delayed. Council and Parliament should fall somewhere in between,

though the buy-in thought to come about by Council and Parliament working together could provide another reason to suggest timely transposition.

New Directives versus Amendments

It was apparent from the initial logistic regression and Chi square tests that it was necessary to to split the analysis into two component parts -- amendments and new directives -- due to the strong interaction effects between issuing authority and whether the directive was new or an amendment. New directives do tend to be more complex, as reflected in the greater number of recitals. Amendments topped out at 44 recitals, while one new directive garnered 85 recitals. Amendments found a median number of recitals at about 7.5, while the median for new directives was approximately 20 recitals. New directives can also be said to be more difficult to transpose from the standpoint of time given to transpose them. Amendments had a median transposition time of approximately 7.5 months, but new directives had a median transposition time of approximately 18 months -- more than twice as long as amendments.

Amendments and new directives were distributed differently across the sectors. Table 4.32 recaps the distribution.

Table 4.32: Distribution of Amendments and New Directives by Sector

	Amendment	New
Employment	119	204
Energy & Transport	407	713
Enterprise	1550	405
Environment	350	311
FJS	50	335
Health & Consumers	3349	475
Internal Market	425	577
Tax & Customs	283	125
Total	6533	3145

There is a somewhat uneven breakdown for the distribution of directives across the sectors. Health & Consumers was heavily weighted toward amendments, and as was shown in the previous chapter, Health & Consumers was by far the best performer of all the sectors. This anecdotally supports the argument that sectors that predominantly receive amendments will have better transposition rates. Enterprise also was a sector that did fairly well, though not to a statistically significant degree, and it is also dominated by amendments. Conversely, FJS has by far the worst transposition record, and most of its directives were new directives. However, Internal Market also did quite poorly compared to the other sectors, and while it did have more new directives to transpose during this time period than amendments, the difference is not great. It appears that the distribution

of new directives versus amendments across the sectors may have an effect, though it is not universal.

We should also, however, take a look at the breakdown of actual transposition rates between the sectors as differentiated by new and amendment.

Table 4.33 Actual Transposition Percentages, New vs Amendment, by Sector

Sector	Amendment	New	Significance
Employment	65.5	58.3	0.2
Energy	**61.9**	**54.0**	**0.01**
Enterprise	72.5	67.7	0.054
Environment	55.1	57.6	0.532
FJS	30.0	37.9	0.280
Health & Consumers	**80.9**	**51.8**	**0.000**
Internal Market	**70.4**	**35.7**	**0.000**
Tax & Customs	**49.1**	**92.8**	**0.000**

Only four sectors had a statistically significant difference in the transposition rates between amendments and new directives. Both Health & Consumers and Internal Market, which have been the primary focus of this study, do have significant transposition rate differences.

Issuing Agency

One factor that was shown in this chapter to likely have an effect on transposition was the issuing agency. The overall analyses showed that the issuing agency had significant effects on the transposition of directives, whether new or amendments.

However, the direction of the significance changed between new directives and amendments. While Council and Parliament always exerted a positive influence, Commission was only positive for amendments, and negative for new directives. Conversely, Council-issued directives were a positive factor for transposition for new directives, but had a delaying effect for amendments.

The hypothesis that because the Council is more often responsible for major policy changes and more complex directives that Council-issued directives will be delayed more often does not hold across the board; for amendments, Council-issued directives are indeed the worst transposed, but for new directives, they are the best transposed. Commission directives are thought to be less policy-focused and more technical in nature and are therefore more likely to be transposed on time. While Commission directives are the best transposed for amendments, they are the worst transposed for new directives. A more in-depth look at the relationship between Council and Commission and amendments and new directives is warranted to explain why this reversal in effects occurs.

With specific regard to Health & Consumers and Internal Market, Health & Consumers amendments were predominantly issued by the Commission. This had a very strong positive effect on transposition. Internal Market directives, on the other hand, were issued 58.8% of the time by the Council and Parliament, which should have had a positive effect. It indeed may have, but not to the extent anticipated. The probability analysis showed that only 36% of Council and Parliament amendments (at mean values

of the quantitative variables) should be transposed on time. This is far short of actual transposition of 70.4%.

New Health & Consumers issued by the Council and Parliament should expect to be transposed 66.7% of the time on time, while Commission-issued new directives are expected to be transposed only 27.3% on time. The actual transposition rate of 51.8% is probably a little bit high for what would be expected from the actual distribution of issuing authority (where 42% were issued by the Commission, 32% by the Council and Parliament, and the remaining 26% by the Council).

Internal Market new directives' probability for transposing on time was 45.28% for those issued by the Council and Parliament. Commission probability was 29.5%. Given the distribution of new directives (83% from Council and Parliament and 17% from Commission) the actual transposition rate of 35% for new Internal Market directives is a bit lower than what would be expected from the probability analysis.

More research is needed to parse out the relationship between issuing authority and sector, especially for amendments. In amendments, the effect of the issuing agency did not follow from the overall model, and did not show any particular pattern. For Health & Consumers and Internal Market, frequently the anticipated rate was fairly close to the actual rate, but in some instances, like Internal Market amendments, other factors must come in to play to explain why actual transposition is so much better than what was predicted by the model.

Time to Transpose

The effect of time given to transpose has two competing arguments in the extant literature. The first is that the longer the time given to transpose a directive, the more likely it would be transposed on time because lawmakers and administrators would have more time to meet the deadline. The second is that the longer the time given to transpose a directive the more likely it would be delayed because a longer time period would be given to directives that were more complex, and more complex directives would more often miss the transposition deadline.

The findings of the logistic regressions were that for amendments, as time to transposed increased, transposition probability increased. For new directives, as time to transpose increased, transposition probability decreased. This may indicate that for amendments, which are often thought to be more straightforward and technical, that a longer time helps to ensure that the workload can be achieved, while for new directives, which are thought to be more complex, a longer period of time could be an indication of the complexity, resulting in delays. The causal mechanisms to explain the differences need further examining.

The effect when broken out by sectors was similar to the effect associated with issuing authority in that time to transpose was sometimes positive and sometimes negative for the various sectors, while it was nearly universally positive for new directives. It is unclear why the relationships vary more for amendments than for new

directives. There does not appear to be a correlation between the average length of time given per sector and the effect of time to transpose on transposition.

Number of Recitals

The number of recitals can be used as a proxy for the complexity of a directive. The hypothesis is that directives with a higher number of recitals are more complex and will therefore be more difficult to transpose on time. The logistic regressions show that for both amendments and new directives, the number of recitals is a significant factor. The number of recitals had a positive effect on the probability for transposition for amendments, but a negative effect on the probability for transposition for new directives.

Likewise for the sector analysis, number of recitals does not follow any sort of a pattern for amendments, but shows a delaying tendency for all but two sectors for new amendments. There does not appear to be any correlation between the number of recitals per sector and transposition rates.

Time and Recital Interaction

A further contention made is that there may be a correlation between the amount of time given to transpose and the number of recitals in a directive. Correlation tables confirm that this is the case and that there is a moderate to strong relationship, but multicollinearity is not an issue. As the time to transpose increases, so do the number of recitals. This supports the theory that as the directive increases in complexity, so does the time given to transpose it. Why this relationship exists is an issue that would benefit from more in-depth case studies. Is there a learning curve within the EU that leads them to

understand the relationship between time and complexity as it relates to new directives that leads them to try to account for that relationship when amendments are issued?

Country

Taking country effects into account lends little new information about the strength or direction of the relationships found. The signs of the coefficients remain the same for all of the independent variables in the analysis. While the coefficient itself changes, it does not change by much and therefore the effect on the probability of transposition is small. However, there is a difference in effects between amendments and new directives. For amendments, when including country effects, the probability for transposition decreases somewhat. For new directives, the probability increases slightly.

Conclusions

The data in this chapter find that each of the independent variables has a significant effect on transposition rates for the overall models, but the effects are not as clear for the individual sectors. I found support for my hypothesis that issuing authority would have a significant effect on transposition. Indeed, because of the interaction between amendments and Commission-issued directives, it was necessary to examine them separately. The difference of effects of issuing agency also carried over to all of the sectors. However, while the effect of Council and Parliament was consistent across new directives and amendments, Commission and Council had opposite effects across the two. Why this is the case deserves investigation.

The effects of the quantitative variables were also all significant in the overall models. An increasing number of recitals and increasing time to transpose had positive effects on increasing the probability of transposition for amendments, but had a tendency to decrease probability of transposition for new directives. The findings held fairly well for new directives for both recitals and time to transpose, but provided mixed results for amendments.

A secondary hypothesis was that while I expected these factors to influence transposition probabilities, I also thought that each factor would be present to greater or lesser degrees in each sector, and that this weighting effect would also be significant for explaining transposition. This hypothesis was confirmed for issuing authority. Chi-square tests confirm that there are statistically significant differences in the distribution of issuing authority between all of the sectors. This hypothesis did not find support for the quantitative variables, either for new directives or amendments.

The results found here are meant to provide an impetus for new in-depth research programs. Clearly, the factors identified here are significant for explaining transposition, but more investigations are necessary to understand the numerous variations and deficiencies found. However, having a large-n, population-complete dataset, combined with the beginnings of explanatory investigations used here, should provide a solid foundation for furthering research into understanding the factors that effect transposition.

CHAPTER V: AN INDUCTIVE APPROACH TO THEORY: POSSIBILITIES FOR CONSTRUCTIVIST EXPLANATIONS

In Chapter II I suggested that deductive methods for investigating European transposition problems were not leading us to clear answers about why the transposition deficit occurs. Starting from a theoretical premise -- in the case of transposition studies, this usually takes the form of enforcement approaches (rational choice) or management approaches (institutionalist) -- developing hypotheses, and testing independent variables on small or biased samples led to contradictory conclusions.

Does the management approach work best? Some previous findings suggest that factors supporting the management approach do provide an answer. But others do not. Likewise with the enforcement approach -- some studies supported this theory while others were contradictory. Given inconsistent findings, I suggested the need to step back, clean up the methodology, and see if the results obtained for a larger sample (in this case, the population of data) provided any insights. How do my findings support or refute management and enforcement approaches?

Börzel et al. (2003) provide a clear and succinct framework for understanding the various forms that the enforcement and management approaches can take. Enforcement approaches suggest that states voluntarily defy the rules because the cost of compliance is too high. Preventing non-compliance can only be achieved by increasing its costs. This does not appear to be the case with EU transposition. This is for two reasons. First, this

theory is based at least partly on the belief that the states ignore international agreements because there is no monopoly of legitimate force at the international level. This is not the case in the European Union. The EU does have a recognized monopoly of force, and the European Court of Justice routinely wins challenges to EU law brought by member states. Sanctions involved can be quite costly. Member States frequently give up their challenges before the cases are brought to the EJC to avoid such penalties. Second, Börzel et al. (2003) state that compliance is lacking because "international norms and rules are not compatible with national arrangements as a result of which compliance requires substantial changes at the domestic level" (p. 16). As we have seen, the transposition rates do vary from country to country, but also vary from sector to sector within each country. Given the great diversity of histories, cultures, and political structures in the European Union member countries, it would be difficult to believe that, overall, Health & Consumer directives are more in line with each individual member country's existing laws and that these laws also all are fairly compatible with the directives issued by the EU. The "misfit" argument does not adequately explain cross-sectoral variation.

Management approaches, on the other hand, state that countries are willing to comply with international rules, but that non-compliance is a result of the lack of capability on the part of the countries to do so. My findings in this dissertation do not support this theory either. Administrative capabilities vary from country to country. But this does not explain the strong association in transposition rates from sector to sector

across countries with various national capabilities. That is, perhaps Italy has weaker administrative and bureaucratic efficiency than other countries. This does not explain why Italy transposes Health & Consumers directives so well, but other sectors so poorly. If this theory were correct, countries would transpose directives in all sectors in accordance with their capabilities. But I have shown here great variation in transposition rates by sector within the same country.

If the basic premises upon which management and enforcement theories rest do not hold, is there another theory that is more consistent with the findings from the data presented herein? Rather than selecting and applying another theory as the starting point for my research, I stated that at this stage perhaps an inductive approach would prove more fruitful. Rather than letting theory structure research questions, letting the data speak for itself may lead to revelations about the kind of theories we should be using in future tests. The inductive method's "emphasis on developing constructs, measures, and testable theoretical propositions makes inductive case research consistent with the emphasis on testable theory within mainstream deductive research. In fact, inductive and deductive logics are mirrors of one another, with inductive theory building from cases producing new theory from data and deductive theory testing completing the cycle by using data to test theory" (Eisenhardt and Graebner, p. 25).

I believe that the data and findings they have generated could perhaps be better understood through a theoretical lens other than those most commonly used. Specifically, I suggest that constructivism may provide a way to understand transposition problems.

Constructivism

For constructivists, the starting point of all investigations is the shared beliefs of the social and political world. Immanuel Kant is a forerunner of constructivism as he argued "that we can obtain knowledge about the world, but it will always be subjective knowledge in the sense that it is filtered through human consciousness" (Jackson and Sørensen, p. 164). Likewise Max Weber can be considered an early constructivist. He believed that people "rely on 'understanding' of each other's actions and assigning 'meaning' to them. In order to comprehend human interaction, we cannot merely describe it in the way we describe physical phenomena, such as a boulder falling off a cliff; we need a different kind of interpretive understanding" (Jackson and Sørensen, p. 164).

Finnemore and Sikkink provide a clear definition of constructivism, which is worth repeating here at length:

> Specifically, constructivism is an approach to social analysis that asserts the following: (a) human interaction is shaped primarily by ideational factors, not simply material ones; (b) the most important ideational factors are widely shared or 'intersubjective' beliefs, which are not reducible to individuals; and (c) these shared beliefs construct the interests and identities of purposive actors.... Constructivism focuses on... 'social facts' -- things like money, sovereignty, and rights, which have no material reality but exist only because people believe they exist and act accordingly. Understanding how social facts change and the ways these influence politics is the major concern of constructivist analysis (pp. 392-393).

Constructivism is typically considered a theory in International Relations, lesser so Comparative Politics. However, I find two good reasons to suggest that constructivism

may be useful in transposition studies, even when using a comparativist approach. First, constructivism "is a social theory that is 'applicable' across disciplines which therefore helps us to transcend recurring inter-disciplinary squabbles" (Christiansen et al., p. 531). A social theory "is concerned with the fundamental assumptions of social inquiry: the nature of human agency and its relationship to social structures, the role of ideas and material forces in social life, the proper form of social explanations, and so on. Such questions of ontology and epistemology can be asked *of any human association, not just international politics"* (Wendt, pg. 5, emphasis added). The foundations of social interaction are surely applicable to comparative politics as much as international relations.

Second, the distinction between international relations and comparative politics is becoming more and more blurred, especially when studying the European Union. Initially, constructivists focused on "causality in only one direction -- norms and social understandings influencing agents" but "(s)cholars were quick to notice that norms and social understandings often had different influences on different agents, and explaining these differences was soon identified as a crucial constructivist research task.... Not only do different states react differently to the same international norms... but the mechanisms by which norms are internalized within states differ as well" (Finnemore and Sikkink, p. 397). The give and take between norms and agents creates the intersection where comparative politics and international relations meet in constructivist theory.

There are, of course, those who do not find constructivism to be a useful theory. Moravcsik believes that constructivism is not particularly helpful and has contributed little to the study of political science in general, and European integration in particular, because "hardly a single claim... is formulated or tested in such a way that it could, even in principle, be declared empirically invalid" (p. 670). He believes this to be the case because, overall, constructivist arguments are indeterminate, so therefore untestable, or because they are "underspecified; they predict behavior that is *contradictory or in principle indeterminate* behavior *and* tell us nothing about how the contradiction and indeterminacy should be resolved" (p. 670, italics in original).

Finnemore and Sikkink agree that constructivism does not, "by itself, produce specific predictions about political outcomes that one could test in social science research. Constructivism in this sense is similar to rational choice. Like rational choice, it offers a framework for thinking about the nature of social life and social interaction, but makes no claims about their specific content" (p. 393). Rational choice makes no specific claims about outcomes, but provides a framework for thinking about how actors, whether states or individuals, will behave -- they will do what is necessary to maximize their wealth or security. Likewise, constructivism does not make specific claims about outcomes, but suggests that intersubjective beliefs shape human interactions and these beliefs inform the interests and identities of the people that hold them.

Constructivism and Transposition

Transposition is one particular piece of the puzzle of European integration. Integration is a process "of industrial, political, legal, economic (and in some cases social and cultural) integration of states wholly or partially in Europe" (European Integration). The exact meaning and scope of European integration or Europeanization in and of itself is a matter of debate and scholarly interest. The influence of the EU on the member states and the influence of the member states on the EU (not to mention other international organizations, such as NATO, the WTO, etc) provide fodder for a whole realm of debate at the theoretical level. While important and worthwhile, these debates are beyond the scope of this dissertation. This particular project is interested in a small aspect of European integration, specifically the transposition of EU directives into law in the member states. Transposition is a crucial piece of the integration puzzle because it is a juncture where the EU sets down common goals to be achieved throughout the Union, and it is incumbent upon the states to achieve those goals. Whether the state agrees with the goal or not, the EU directive does become the law of the land, integrating those particular aspects of law across all member countries.

The project of European integration began at the conclusion of World War II, where a few European nations conferred control of their coal and steel production to a centralized European Coal and Steel Community (ECSC) in an attempt to promote transparency among countries in two sectors that were important not only to warfare but

also to reconstruction. Creating a unified community ensured that their futures would be intertwined and was seen as a way to discourage future wars on the continent.

European cooperation continued to grow with the establishment of the European Atomic Energy Community, and the European Economic Community. In 1987, the Single European Act was established, which formally established a single European market. Writing in 1988, Fritz Scharpf notes that the "European Community... has increased its territorial scale from the original six to twelve member states, and it has also broadened its functional responsibilities beyond the specific mandates of the original treaty. Indeed, there is considerable pressure for further functional expansion in such areas as industrial policy, technology policy, communications policy and monetary policy, where the Community is urged to assume governing responsibilities for which the nation state has become too small" (p. 240). Today, all of the areas that Scharpf suggested may come under the realm of the EU have, and then some. The size and scope of the European Union has increased tremendously.

How did this expansion come about, and what does it mean for transposition? When the ECSC came into existence, it would have been unthinkable, literally speaking, to suggest that the EU take control of European monetary policy. But over time, what is considered appropriate for the EU to manage has expanded. "A significant amount of evidence suggests that, as a process, European integration has a *transformative* impact on the European state system and its constituent units" (Christiansen et al., p. 529). I suspect

that there is a connection between what is considered appropriate for the EU to legislate and transposition rates.

March and Olsen have brought to the forefront of constructivism the "logic of appropriateness". The logic of appropriateness "is a perspective that sees human action as driven by rules of appropriate or exemplary behavior, organized into institutions. Rules are followed because they are seen as natural, rightful, expected, and legitimate" (March and Olsen, 2009). Further,

> actors are guided by collective understandings of what constitutes proper, that is, socially accepted behaviour in a given rule structure. These collective understandings and intersubjective meanings influence the ways in which actors define their goals and what they perceive as 'rational' action. Rather than maximizing their subjective desires, actors strive to fulfil [sic] social expectations. From this perspective, Europeanization is understood as the emergence of new rules, norms, practices, and structures of meaning to which member states are exposed and which they have to incorporate into their domestic practices and structures." (Börzel and Risse, pp. 65-66).

I suggest that European norms, demonstrated through the transmission of authority to the European Union, may help frame our understanding of member state transposition. If one were to ask why member states comply better with some sector directives than others, the answer may be because in those sectors norms and collective learning have been more solidified and acceptance of authority of the EU in those areas is consolidated. These are areas that are *appropriate* and understood as such for the EU to legislate.

Different sectors have been incorporated into the EU legislative structure for varying lengths of time, leading to differences in established norms regarding their

appropriateness. European "institution-building and policy-making are unevenly developed across institutional spheres and policy areas, (such that) the adaptive pressures on states and institutions vary" (Olsen, p. 933). As constructivists note, creating and establishing new norms takes time. The "longer agents participate in a particular institutional setting... the more likely it is that socialization occurs" (Checkel and Moravcsik, p. 225).

Börzel and Risse note that "... actors learn to internalize new norms and rules in order to become members of (international) society 'in good standing'.... Actors are socialized into new norms and rules of appropriateness through processes of arguing, persuading, and social learning and to redefine their interests and identities accordingly" (p. 66). However, Börzel and Risse and others look at this process of learning and how it varies from country to country to explain differences in adaptation to EU laws/norms. As I have argued in this dissertation, reframing the discussion to look at sector differences may provide new insights; this is true not only for the statistical data, but also for the explanatory options presented. If we take this explanation, that actors are socialized into norms of appropriateness, and that the longer agents participate in that setting, the more likely it is that socialization occurs, and apply it to sectors, it could help to explain variation in transposition rates. Christiansen et al. agree that "variation across policy areas is an important aspect of the integration process" (p. 529) that can be analyzed using the tools of constructivism.

Reframing Fit-Misfit

Building on the logic of appropriateness and the constructivist understanding on the role of norms, I suggest reframing the fit-misfit argument from looking at policy prescriptives to normative issues. That is, while the misfit arguments examine to what extent a specific policy fits with existing national legislation (therefore leading to its timely transposition or delay), I believe we may gain more insights using a constructivist framework to examine how generalized acceptance of EU authority in different sectors affects member state transposition.

Using environmental regulations as an example, Börzel and Risse say "(i)f European environmental regulations ... match with domestic policies, member states do not need to change their legal provisions. In general, if European norms, rules, and the collective understandings attached to them are largely compatible with those at the domestic level, they do not give rise to problems of compliance or effective implementation more broadly speaking" (p. 61). Börzel and Risse here are advocating a most commonly-accepted view of misfit -- that if EU legislation matches existing domestic legislation, and no domestic-level adjustments are required, there is no "misfit" and the EU legislation will likely be transposed on time. The further the EU directive strays from any individual country's existing legislation, the greater the degree of misfit and the more difficult transposition will be.

The misfit hypothesis, as defined, has been fairly well discredited. However, there is no reason to limit this analysis to specific legal provisions. There is no reason their

understanding of "European norms, rules, and the collective understandings attached to them" has to be directly related to a specific piece of legislation. If the "European norms, rules, and the collective understandings attached to them" instead are thought of in terms of acceptance of EU authority over a particular sector, perhaps the same conclusion may be drawn more broadly. That is, hypothetically speaking, if member states generally accept the authority of the EU in any given sector, and the widely accepted norm of transposing EU law holds, then sectors that have generated more universal support may transpose EU directives better than those that have not.

"No doubt, there are many situations and aspects of integration where agents operate under the means-end logic of consequences favored by rationalist choice and some historical institutionalists" (Checkel, p. 547). Where EU-centric norms have not pervaded, either through active disputes or merely a lack of time to have reached a consensus, those areas may well be better understood through a rationalist framework. Where common understandings do not exist and norms have not been developed, it is perhaps more likely that rationalist explanations will fit better with the behavior exhibited by member states.

These arguments, that norms take time to be established, and those sectors that are better established and where socialization over the appropriateness of EU authority has consolidated, can go on to be used as a framework for testing specific cases of (non-) transposition. I would expect that in areas that are well-established and EU authority is unquestioned (perhaps like Health & Consumers), that this could help account for better

transposition. EU authority is seen as legitimate and the directives issued are appropriate for equal dissemination across the member states.

Contrarily, perhaps the constitutive role of the institutions surrounding FJS have not solidified and produced the norms and the "logic of appropriateness" that would ensure better transposition rates. FJS is the most recently added sector to the European Union, moving incrementally from the third pillar to the first pillar, signaling a move from intra-governmental agreements to EU jurisdiction. The FJS sector is not entirely consolidated and many specific areas of responsibility were recently moved to EU authority. The newness of this area to EU authority could explain why transposition has been poor; if a constructivist argument were to hold true, the learning and acceptance in this area may not have come far enough about to encourage acceptance of EU directives in this sector.[5]

Likewise, FJS has two somewhat contradictory areas of interest -- freedom and security. Freedom suggests the importance of freedom of movement, freedom of congregation, the ability of families to stay together, rights to asylum, etc. These do not seem like areas where there should be dispute, especially in historically liberal democratic nations. Yet, these freedoms frequently butt up against security concerns, especially after the terrorist attacks that occurred in the U.S. and in Europe in the 2000s. The notion of minimizing internal risks through restrictions on movement, restrictions on

[5] However, Merand makes an interesting case that in the field of defense policy, specifically, that common defense is well-accepted and has been becoming more integrated through the EU. This is in line with my argument that as time goes on, integration in historically nationalistic areas will become more common and uncontroversial.

speech, restrictions on citizenship, etc. all cause a tension with the rights and responsibilities of freedom.

The newness of this area of responsibility for the EU, combined with the tension in what is the proper role for the EU to take versus what is the desired role for the nation state in ensuring its own security are at odds with each other. Accepted norms may not have solidified in this area. I suggest that this could be a reason for the lack of timely transposition in this area.

The internal market, which shows a positive tendency for transposing amendments but a negative tendency for transposing new directives is possibly another case where the role of the EU and its legitimate authority is questioned. I would suggest that the expanding nature of the EU may be cause for the delayed transposition of new directives in internal market. Directives that have already been transposed, suggesting an acceptance of authority in this area, will find that amendments to those directives may be more easily transposed. I would hypothesize that an amendment merely makes a change to something that is already socialized and accepted by the member states, and amendments in internal market are transposed very well overall. On the other hand, if new directives are venturing into new territory where the member states are insecure about giving up national authority and question the appropriateness of the EU to legislate. This would contribute to new directives being transposed poorly.

Future Research

At this point, this is all merely conjecture. In this dissertation I do not claim to test the constructivist theory against my data. This is a job for a future time. In fact, a large-n work is ill-suited to conducting a constructivist inquiry to transposition rates. Because constructivism is based in people's understanding and learning processes, it is ideally suited to case-study approaches. Obvious case studies would be those that I have described in this chapter. Examining specific directives that were (not) transposed on time and process tracing the discussions and debates surrounding transposition of said directives would be a prudent way to test the constructivist theory. Transcripts of meeting notes and first-person interviews with those directly involved in the processes of transposing laws would shed light on why a directive was (not) transposed on time, and would be crucial for understanding the thought processes that went into such decisions. These would be important both to confirm expected outcomes for specific directives, as well as to help explain unexpected outcomes.

Further, the data compiled here provide the foundation for numerous case studies. Having conducted a large-n research project, the findings reported herein can serve as a useful starting point for any research in any sector or on any country. As mentioned earlier, the novelty of this project was the comprehensive scope and methodological rigor which provides a firm foundation for future research. Constructivist theories could be applied not only to my findings on Health & Consumers, FJS, or Internal Market, but to Spain in an attempt to understand its wildly varying transposition rates, or to the United

Kingdom to understand its steady transposition rates across all sectors. It could be used to examine the transposition history of any specific directive or set of directives. As with rationalist explanations, the beauty of constructivism is its ability to provide a generalizable framework for understanding human behavior. As it applies to transposition, the possibilities for explaining differing transposition rates is potentially very great. Rather than being confined to rationalist or institutionalist models, I believe the findings initially presented in this dissertation show that constructivism could be a useful research tool for future studies.

Conclusions

I set out to conduct a methodologically sound study of transposition, and see if it led us to a better truth, inductively, about existing theories. I believe in this respect this has been done. Little support was found, given the results of the data analysis, for the rationalist/enforcement or institutionalist/management accounts. I then looked at what the data did reveal, and found that constructivism may provide a theory that fits the data.

Constructivism suggests that norms and values are socially constructed and are mutable. However, what is socially acceptable is usually slow to change (except, perhaps, in the face of a crisis). This suggests in terms of EU transposition that those sectors that are firmly established under the EU, that have the moral authority and support of the member states for their authority over those areas, will have better transposition rates than those sectors where EU authority is questioned or merely where authority has not

had time or reason to solidify. Anecdotally, the best performing sector does appear to be more socialized and accepted as an EU area of authority than do the two worst performing sectors. This is worth following up on using a deductive, path-dependent analysis of specific policies within each sector.

I do not mean to imply by this chapter that I believe constructivism in and of itself is the answer. I fully appreciate that no one theoretical stance can account for any political activity. Indeed, rationalist accounts must also be incorporated, for "much of our everyday social interaction is about strategic exchange and self-interested behavior" (Checkel 1999, p. 546). I merely suggest that existing rationalist and institutionalist theories as currently applied to the transposition problem do not present solid answers. Having looked at the problem inductively, it appears that a constructivist explanation may help to explain at least a substantial part of the transposition problem.

A good and necessary next step will be to apply specific testable and determinate hypotheses in the constructivist vein against the data to see if the data on a more specific level confirm the inductively-reached conclusions of this dissertation. Causal mechanisms, critical junctures, and influential voices all must be described specifically in testable ways and conducted through case studies. This is a logical next step for this project in understanding European integration.

CHAPTER VI: CONCLUSIONS

Summary

This dissertation made four main claims. First, I suggested that there were methodological problems with existing studies on European transposition that needed to be addressed. Second, I claimed that once the methodological problems are attended to, it opens up the possibility of reframing the question about the causes and effects of delayed transposition. Third, by conducting a more thorough analysis, I believed we would gain new insights into transposition patterns. Fourth, I suggested that theoretical questions may best be addressed by looking at the problem inductively, rather than deductively.

In Chapter II , I addressed the first two claims. I showed how transposition studies to date have taken individualized approaches to collecting data, which limits the applicability of the findings to that study alone. Each researcher independently determines what they mean by delay and how they determine if there has been a delay. Standardization is needed so that findings may be challenged and processes replicated across the EU.

Next, I stated that the lack of ensuring statistical significance in the findings surely affects the outcomes. Conducting a regression to see what factors may account for the observed outcome is fairly straightforward. Current studies examine many different factors to see what affects transposition. However, no study had determined if the differences they were examining were statistically significant. In ignoring this particular step, researchers were prone to making claims about what affects transposition in some

countries or some sectors compared to other countries or sectors, but those claims were not necessarily valid. Without examining to see which countries or sectors actually deviated from each other in a statistically significant way, most studies were comparing differences that fell within the normal distribution.

Finally, most research is focused on member state transposition differences and looks for factors that vary between the states to account for it. I argued that it is time to reframe the discussion to look at differences between sectors and sector-based explanatory factors. Examining the problem this way opens up new avenues for exploration and could account for explaining more of the variation than has currently been found by using country-based explanations.

Chapters III and IV addressed the third claim, that more rigorous model development would yield better results and allow for a more thorough analysis of the factors that affect transposition. In Chapter III, I determined the size of the compliance deficit for all of the European Union (excepting Bulgaria and Romania, for which I did not have data for the whole time period due to their entrance into the EU only in 2007) for the time period 2005-2008. I used the entire population of data available for the 25 member countries. In this way I limited biases due to selection, either on country or sector. I specifically chose 2005-2008 because all 25 countries were full EU members during that period, stopping in 2008 because that was the latest data available at the time. This time period was also important because the same voting rules and methods were in place for the entire time period, therefore also reducing bias due to different voting

methods during different time periods. I used EU-provided data, which has been shown to be reliable, especially more so since the introduction of electronic transmittal of transposition information in 2004. And I categorized my dependent variable as on time (1) or delayed (0), based on data provided in Annual Reports. By not relying on infringement letters, referrals to the ECJ, or other "sanctions" issued by the Commission, I aim to get a true understanding of the actual transposition rate.

By conducting this analysis of the full population of data available, I found that there are indeed differences in transposition rates. Denmark, Germany, Lithuania, Estonia, Netherlands, and Slovakia did significantly better than average, while Italy, Greece, and Portugal did significantly worse than average. For sectors, I found that Health & Consumers was better than average, and FJS and Internal Market were significantly worse than average. These findings alone are significant. They provide a baseline from which other theories can be tested. To examine country differences, we now know which countries are markedly different than the others; we know that to test why the UK does better (or worse) than Belgium is a moot exercise -- there is no significant difference to explain. Likewise, discussing the differences in transposition rates between the Employment sector and Environment will yield no significant findings. Case studies can be carried out now that we know where the differences are.

What I found more interesting is that there is a strong association between sector and transposition for all countries except the United Kingdom. Sector matters. And it matters especially in those sectors that do better or worse than average. Health &

Consumers was found to be transposed significantly better than average overall, and this was borne out in individual tests by country. For 19 of the 25 countries, Health & Consumers directives were transposed significantly better than their own individual country average. That is, Lithuania with its 83% on-time transposition rate transposes Health & Consumers significantly better than that 83% average. Even Portugal, with its poor overall transposition rate of 47% , transposes Health & Consumers directives significantly better than 47%. There is something about Health & Consumers directives that need to be investigated to see why its transposition rate is so much higher, even across a wide range of countries, than other sectors.

Likewise, the opposite effect can be seen with FJS and Internal Market. These two categories overall were found to be transposed significantly worse than the others on average. This holds true across countries. FJS and Internal Market were transposed significantly worse in 14 countries. When I compare how FJS and Internal Market do, by country, compared to Health & Consumers, by country, FJS is significantly worse in 15 countries, and Internal Market is significantly worse in 17 countries.

Since I was interested in examining sectoral differences, in Chapter IV I tried to identify factors that may differ by sector to explain them. Examining state-based factors that affect transposition is consistent with trying to determine state-based differences, but examining sector-based differences required a different set of independent variables. I chose to examine who issued the directive (Commission, Council, or Council and Parliament), how many months were given for transposition to take place, how many

recitals were included in the directive (as a measure of complexity), and whether the directive was new or was merely amending a previously issued directive. I hypothesized that some of these factors would facilitate timely transposition, while others would contribute to delay, and that an unequal distribution of these factors across sectors would account for some of the differences in transposition rates.

I found that for both amendments and new directives all of the factors were significant. Concerning amendments, Commission-issued directives were transposed faster, and Council-issued directives were subject to delay. As the length of time given for transposition and the number of recitals increased, the chance of transposition timeliness increased. This supports the hypothesis that increased time helps the transposition process by providing an adequate amount of time, and that recitals perhaps clarify intentions and provide important background information that help transposition. These two variables are highly correlated as well; the higher the number of recitals the longer the length of time available.

For new directives, while the factors were also all significant, the effect was the opposite that found for amendments. Council and Parliament continued to have a strong positive effect on transposition, Council did as well but the Commission did not. The quantitative variables all showed that as the amount of time increased and the number of recitals increased, transposition probability decreased. This supports the hypothesis that for new directives the more complicated they are, the more likely they are to be delayed.

The influence of these factors when broken out by sector is more mixed. Health & Consumers was a sector that was dominated by Commission-issued amendments which are two factors that help ensure transposition timeliness. Indeed, Health & Consumers amendments are transposed at over 80%. Internal Market amendments are transposed on time 70% of the time, but the factors considered here suggest that the transposition rate should be much lower. Other factors must account for the good transposition rate in this sector.

Health & Consumers new directives were transposed at 51%. Again, the transposition probabilities based on different issuing agencies vary considerably, from 27 percent for Commission to 66% for Council and Parliament. The distribution of the directives across the issuing agencies suggests that the 51% overall is fairly in line with expectations. Internal Market new directives are transposed on time 35% of the time. The probabilities based on issuing agency suggest that Council and Parliament directives should be transposed on time 45% of the time, and Commission directives almost 30%. Given that Council and Parliament issues 83% of the directives, the probability is close to the actual, perhaps a bit lower. Disappointing results are found in the analysis of FJS. Only the positive effect of Coucil-issued new directives had a statistically significant effect on the transposition rates in this sector. Overall, the findings were very mixed and inconsistent when examined on a cross-country basis. Further studies are required to determine what accounts for the differences between new directives and amendments as

well as the differences between sectors since the factors considered here were not consistent.

Chapter V then went on to look at the theoretical considerations of this dissertation. A primary aim of the dissertation was to try to develop an inductive theoretical model for transposition. The extant research was universally structured deductively. Each scholar took, most frequently, an enforcement (rationalist) approach or a management (institutionalist) approach. The enforcement approach suggested that states, being rational actors, will try to maximize security and wealth while minimizing costs. If a directive was too costly (from either a monetary or security standpoint), it would not transpose it. Sanctions, if they came, could be dealt with later, and would again be examined in a rationalist framework to decide what the best course of action would be. Enforcement theorists suggest that tighter enforcement of the laws will create better adherence to transposition requirements.

Management (institutionalist) scholars, on the other hand, suggested that states are often willing to transpose directives, but lack the capacity to do so. Either their administrations do not function capably, or the directives are unclear and administrators are unsure of what their requirements are under the law. In this scenario, management theorists suggest that more clearly written laws and help to states to acquire administrative capacity would increase transposition compliance.

I found through my analysis, however, that neither of these theories hold up very well when we reframe the transposition problem to be one of transposition by sector.

According to the results of the statistical analyses, there is an overwhelming association between transposition rates by sector among the countries. That is, except for the United Kingdom, the assumption of independence for transposition rates between the sectors was falsified. The logistic regressions proved that there are some sectors that are transposed very well, and some sectors that are transposed very poorly.

The enforcement approach is based on the idea that the dictates of the directive are too costly to implement, that is, they deviate too much from the existing laws of the land. This is difficult to imagine given the strong correlation of transposition rates across sectors. It is unlikely that the Health & Consumers directives issued by the EU are all very much in line with the existing laws in each of the different 25 member countries such that there is little variation required by any of the member states and therefore a high compliance rate. Likewise, are the laws on immigration, for example, so similarly far from what the EU directs countries to adopt in each of the 25 member countries that they all fail to transpose them at such a high rate? Given the literature that describes how different the EU member states are from one another, that they would have so many similarities in specific fields that accounts for similar transposition rates in the different sectors seems highly unlikely.

Likewise the management approach is not supported by the findings in this dissertation's statistical analysis. The management approach assumes that countries want to transpose directives in a timely fashion, they just lake the capacity to do so. When looking at country transposition rates, this on the surface could seem plausible -- the

poorer countries of Italy, Portugal and Greece may have a harder time transposing laws than their wealthier neighbors. However, this does not explain the differences in transposition rates across the sectors. If the management approach were to hold, the worst transposing countries should do poorly across the board, and likewise the wealthier, more bureaucratically efficient countries would do well across the board. As the analyses show, there is a remarkable correlation in transposition rates that transcend country differences. Most countries transpose Health & Consumers very well, and most transpose FJS and Internal Market very poorly, making transposition irrespective of country capabilities.

Given that existing theories using deductive methods did not find support in my analysis, I determined the prudent course would be to let the data speak for itself, then try to suggest, through an inductive process, a theory that fit the data. Is there a theory that would explain consistency of good (poor) transposition across the different member states of the European Union? Given the areas where transposition has been positive (Health & Consumers) and where it has been negative (FJS and Internal Market), I believe that constructivism may provide a guiding framework for understanding these transposition patterns.

Constructivism is a social theory more than a hard political science theory. It does not, in and of itself, provide specific predictions about outcomes, but rather provides a framework for thinking about how actors may act in different scenarios. For instance, a constructivist point of view may not predict specifically if a given directive will be transposed on time, but may provide a framework for suggesting whether it will, and

through process tracing can provide convincing arguments for explaining what did happen.

My hypothesis is that constructivism may provide insights, based on logics of appropriateness, as to why some sectors transpose directives better than others. The EU has evolved over many decades, and over time has acquired ever more areas of responsibility. Some of these areas may be more unquestioningly accepted as appropriate for the the EU to legislate. Other sectors, or subfields within a sector, may be more contested. The appropriateness of a given sector may provide cues as to why some sectors perform better than others. I suggest that that Health & Consumers directives may be considered more appropriate, less controversial, than other sectors and that explains their overwhelmingly positive transposition rate across the member countries. Perhaps the role of the EU in legislating this sector is unquestioned among the EU members.

Conversely, FJS and Internal Market may be areas of responsibility where the EU is not fully accepted as the legitimate voice of authority. FJS is the newest area to the European Union, and many of its specific functions still fall under intergovernmental authority. The transfer and acceptance of authority to the EU in this area is still very contested. Likewise, Internal Market has been part of the European Union for longer than FJS, but it is a rapidly expanding area, and the reach of the EU into the market may cause tension domestically. This could explain why amendments are transposed very well -- they are merely modifying agreements already made and that are seen as legitimate and appropriate, while new directives are encroaching more and more on new territory, that

provides a reason for caution on the part of the member states. It will be interesting to see if the global recession and massive debt problems in some countries of the EU provide fodder for strengthening the role of the EU in internal markets, such that the role of the EU in this sector is further legitimized, or if the economic collapses have been too much and countries seek to take back more control over the markets in an attempt to help insulate themselves from future shocks.

Of course, this is not a theory-testing dissertation, so I cannot say with any certainty that these claims will withstand more intense scrutiny. What I did aim to do, though, was provide a new way of thinking about how we could explain transposition given the new information found in this dissertation that shows that sectors provide an interesting lens through which to examine transposition. On the face of things, it does appear that constructivism, which is all too often ignored in comparative politics, does provide a framework for understanding transposition problems and successes.

Implications

Why is understanding the processes and outcomes of directive transposition important? Why should we spend our time investigating this particular problem? I believe there are two main reasons. First, transposition is a foundation of European integration. The basis for the EU is to provide a common framework for delivering economic and political cooperation. It seeks to provide "peace, stability, and prosperity" (European Union) to all people living within its borders. In order to facilitate this common

framework, the EU issues directives which set forth a goal to be achieved, but leaves it up to the member states exactly how to reach that goal, allowing each state to consider local history, preferences, political systems, etc. that may affect specific aspects of their legislation. Without harmonization of the laws across all member states of the EU, there is little ground for integration.

European integration is one part of the process of Europeanization. I consider Europeanization to be the "process by which domestic areas become increasingly subject to European policy-making" (Börzel, 1999, p. 574). Europe matters, but what "is still controversial, however, is how and when it matters" (Börzel, 1999, p. 574). Studying transposition patterns, especially how it varies from sector to sector and how it changes (or does not change) from country to country gives us more information about how Europe matters, in what areas Europe is particularly "sticky", and in what areas Europe has not solidified its authority.

Second, and drawing on the observations of Europeanization above, by looking at transposition through a constructivist lens, we may be able to learn more about why transposition is more successful in some areas, and draw insights about the role of (perceived) legitimacy and appropriateness which can be applied to future discussions and decisions about areas of EU authority. Specifically, constructivism can help us "to theorize and explore empirically these neglected questions of interest and identity" (Checkel, p. 546). How actors identify themselves, how they see their interests, and how they have learned these and have been socialized to think about these things

affect what they see as the appropriate role for the EU. The EU does not exist in a vacuum. Rather, the EU exists because it is socially acceptable for it to exist. The idea of the European Union was born, and grew, over time and with the evolving acceptance through social learning by members of the societies in the member states of Europe. Likewise, its areas of authority have grown and evolved over time. Each time new areas of authority were ceded to the EU, it came both after and during a period of socialization and acceptance. A constitutive amount of authority must have been garnered to cede a certain sector to the EU in the first place, but it is a continuing process, with the actors in the member states also taking time to learn and accept the authority of the EU in these new areas. Institutions are thin, as rationalists believe. In new areas of authority, they serve as "a structure that actors run into, go 'ouch', and then recalculate how, in the presence of the structure, to achieve their interests" (Checkel, p. 546). But this is early on, when the structures are new. At the same time, the structure imposed was imposed because it "constitute(s) actors and their interests" (Checkel, p. 547). The structure can only come about through the understandings of the actors and their acceptance. Structures and actors are mutually constituted. It is the learning and socialization that goes on over time that moves the understanding from the few key players who have the power and the will to formally organize the structure to the greater understanding and acceptance of all. It takes time and socialization to go from bumping into the structure to accepting and legitimizing the structure.

Future Directions

This dissertation aimed to provide a new way of thinking about transposition and provide a baseline from which to analyze transposition data. I have shown that transposition studies can be greatly improved by adhering to stricter methodological standards and by reframing the analyses to examine transposition by sector, rather than by country. This provides new avenues for conducting future research as well as for reframing the theoretical discussion. As such, this dissertation is but a starting point for a new round of transposition research. And future research is required. Since this writing began, the Treaty of Lisbon has taken effect changing yet again some basic structures and voting rules, Europe is facing a continuing global recession and debt crisis, issues of immigration/terrorism/xenophobia continue to grow and challenge national governments and the EU. Europeanization and integration proceeded rapidly during the late 20th century, but there are more and more calls on the parts of national governments to slow down further consolidation of Europe. How these changes in the political climate effect transposition should be examined. I hope that the ideas presented in this dissertation provide the beginnings of a framework to structure those future endeavors.

APPENDIX 1

Logistic Regressions

Amendments

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-0.608	0.1366	-0.876	-0.340	19.820	1	0.000
[Commission_Council_CP=0]	-0.360	0.0857	-0.528	-0.192	17.636	1	0.000
[Commission_Council_CP=1]	0.372	0.1184	0.140	0.604	9.857	1	0.002
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.061	0.0107	-0.082	-0.040	32.568	1	0.000
Time_Transpose_Months	-0.019	0.0091	-0.037	-0.001	4.281	1	0.039
TN	0.005	0.0007	0.004	0.006	51.586	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment

New Directives

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-2.437	0.1596	-2.750	-2.124	232.964	1	0.000
[Commission_Council_CP=0]	0.604	0.1216	0.365	0.842	24.632	1	0.000
[Commission_Council_CP=1]	-0.303	0.0946	-0.489	-0.118	10.275	1	0.001
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.055	0.0061	0.043	0.067	82.556	1	0.000
Time_Transpose_Months	0.096	0.0086	0.079	0.113	123.143	1	0.000
TN	-0.002	0.0003	-0.002	-0.001	21.364	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New

Amendments-Sectors

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	3.216	4.7806	-6.154	12.586	0.453	1	0.501
[Commission_Council_CP=1]	-1.119	3.6241	-8.222	5.984	0.095	1	0.757
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.547	0.3689	-1.270	0.176	2.202	1	0.138
Time_Transpose_Months	-0.097	0.1389	-0.369	0.175	0.490	1	0.484
TN	0.016	0.0105	-0.005	0.037	2.321	1	0.128
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Employment

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-4.913	1.1284	-7.124	-2.701	18.955	1	0.000
[Commission_Council_CP=0]	1.166	0.5279	0.131	2.201	4.880	1	0.027
[Commission_Council_CP=1]	-19.855	21905.07	-42953.010	42913.299	0.000	1	0.999
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.468	0.0898	0.292	0.644	27.161	1	0.000
Time_Transpose_Months	0.121	0.0520	0.019	0.223	5.448	1	0.020
TN	-0.014	0.0039	-0.022	-0.007	13.104	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Energy & Transport

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-1.567	0.4399	-2.429	-0.705	12.689	1	0.000
[Commission_Council_CP=0]	0.332	0.1792	-0.019	0.684	3.437	1	0.064
[Commission_Council_CP=1]	-21.110	15892.4	-31169.644	31127.423	0.000	1	0.999
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.046	0.0471	-0.047	0.138	0.932	1	0.334
Time_Transpose_Months	-0.039	0.0277	-0.094	0.015	1.995	1	0.158
TN	0.005	0.0029	-0.001	0.010	2.624	1	0.105
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Enterprise

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	10.168	2.4570	5.352	14.984	17.126	1	0.000
[Commission_Council_CP=0]	-0.879	0.2701	-1.409	-0.350	10.598	1	0.001
[Commission_Council_CP=1]	-6.749	1.8871	-10.447	-3.050	12.789	1	0.000
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.639	0.1691	-0.970	-0.307	14.270	1	0.000
Time_Transpose_Months	-0.568	0.1371	-0.837	-0.299	17.154	1	0.000
TN	0.037	0.0101	0.017	0.057	13.277	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Environment

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	0.788	0.5850	-0.359	1.934	1.813	1	0.178
[Commission_Council_CP=1]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.021	0.1645	-0.344	0.301	0.017	1	0.897
Time_Transpose_Months	0.030	0.1644	-0.292	0.352	0.033	1	0.856
TN	0[a]	.	.	.	.	.	.
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = FJS

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-0.414	0.3121	-1.026	0.197	1.763	1	0.184
[Commission_Council_CP=0]	-0.823	0.2449	-1.303	-0.343	11.302	1	0.001
[Commission_Council_CP=1]	-0.714	0.3064	-1.314	-0.113	5.426	1	0.020
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.063	0.0208	-0.103	-0.022	9.051	1	0.003
Time_Transpose_Months	0.021	0.0195	-0.018	0.059	1.105	1	0.293
TN	0.002	0.0019	-0.002	0.005	0.914	1	0.339
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Health & Consumers

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-2.831	0.5168	-3.844	-1.818	30.016	1	0.000
[Commission_Council_CP=0]	2.026	0.4047	1.233	2.819	25.062	1	0.000
[Commission_Council_CP=1]	1.698	0.4928	0.732	2.664	11.867	1	0.001
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.012	0.0318	-0.075	0.050	0.147	1	0.702
Time_Transpose_Months	0.060	0.0300	0.001	0.118	3.946	1	0.047
TN	0.004	0.0019	0.000	0.008	4.237	1	0.040
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Internal Market

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	0.170	0.3539	-0.523	0.864	0.231	1	0.631
[Commission_Council_CP=0]	0.599	0.4659	-0.314	1.512	1.652	1	0.199
[Commission_Council_CP=1]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.011	0.0445	-0.099	0.076	0.067	1	0.796
Time_Transpose_Months	-0.102	0.0544	-0.209	0.004	3.543	1	0.060
TN	0.008	0.0042	-0.001	0.016	3.197	1	0.074
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment, Sector = Tax & Customs

New Directives- Sectors

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-0.611	1.4113	-3.377	2.155	0.188	1	0.665
[Commission_Council_CP=0]	-0.320	0.5249	-1.349	0.709	0.372	1	0.542
[Commission_Council_CP=1]	0.929	0.3679	0.208	1.650	6.377	1	0.012
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.044	0.0492	-0.140	0.053	0.782	1	0.376
Time_Transpose_Months	0.036	0.0509	-0.064	0.136	0.495	1	0.481
TN	3.97E-0	0.0019	-0.004	0.004	0.000	1	0.984
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = Employment

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-4.183	0.7444	-5.642	-2.724	31.574	1	0.000
[Commission_Council_CP=1]	-0.751	0.2377	-1.217	-0.285	9.979	1	0.002
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.163	0.0448	0.076	0.251	13.298	1	0.000
Time_Transpose_Months	0.158	0.0326	0.094	0.222	23.394	1	0.000
TN	-0.005	0.0019	-0.009	-0.002	7.843	1	0.005
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = Energy & Transport

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-2.658	0.5824	-3.800	-1.517	20.832	1	0.000
[Commission_Council_CP=0]	0.437	0.2561	-0.065	0.939	2.908	1	0.088
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.123	0.0387	0.047	0.199	10.045	1	0.002
Time_Transpose_Months	0.053	0.0251	0.003	0.102	4.374	1	0.036
TN	-0.004	0.0015	-0.007	0.000	5.205	1	0.023
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = Enterprise

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-4.173	0.7859	-5.713	-2.632	28.191	1	0.000
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.157	0.0463	0.066	0.248	11.456	1	0.001
Time_Transpose_Months	0.162	0.0343	0.095	0.229	22.437	1	0.000
TN	-0.005	0.0018	-0.008	-0.001	7.375	1	0.007
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = Environment

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-0.698	1.7541	-4.136	2.740	0.158	1	0.691
[Commission_Council_CP=1]	-0.729	0.3620	-1.439	-0.019	4.053	1	0.044
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.061	0.0582	-0.053	0.175	1.096	1	0.295
Time_Transpose_Months	0.053	0.0778	-0.099	0.206	0.473	1	0.492
TN	-0.002	0.0025	-0.007	0.003	0.413	1	0.520
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = FJS

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-3.649	0.6615	-4.945	-2.352	30.431	1	0.000
[Commission_Council_CP=0]	1.673	0.3527	0.982	2.364	22.496	1	0.000
[Commission_Council_CP=1]	-0.184	0.2750	-0.723	0.355	0.447	1	0.504
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.064	0.0278	0.010	0.119	5.349	1	0.021
Time_Transpose_Months	0.157	0.0335	0.091	0.223	21.981	1	0.000
TN	-0.001	0.0016	-0.005	0.002	0.755	1	0.385
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = Health & Consumers

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-3.699	0.5512	-4.780	-2.619	45.050	1	0.000
[Commission_Council_CP=0]	0.682	0.2980	0.098	1.266	5.235	1	0.022
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.074	0.0120	0.051	0.098	38.234	1	0.000
Time_Transpose_Months	0.212	0.0296	0.154	0.270	51.334	1	0.000
TN	-0.004	0.0007	-0.005	-0.002	25.420	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New, Sector = Internal Market

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-20.665	6743.95	-13238.574	13197.243	0.000	1	0.998
[Commission_Council_CP=1]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.165	156.82	-307.526	307.196	0.000	1	0.999
Time_Transpose_Months	-0.452	972.54	-1906.596	1905.692	0.000	1	1.000
TN	.043[b]	.	.	.	.	.	.
(Scale)	1[c]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Hessian matrix singularity is caused by this parameter. The parameter estimate at the last iteration is displayed.

c. Fixed at the displayed value.

d. New- 1, Amendment- 0 = New, Sector = Tax & Customs

Amendments- Sectors, Countries

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-0.329	0.1939	-0.709	0.052	2.869	1	0.090
[Commission_Council_CP=0]	-0.381	0.0881	-0.553	-0.208	18.667	1	0.000
[Commission_Council_CP=1]	0.394	0.1221	0.155	0.633	10.428	1	0.001
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
[Country_Relevance=Austria]	-0.272	0.1991	-0.662	0.118	1.868	1	0.172
[Country_Relevance=Belgium]	-0.548	0.2064	-0.953	-0.144	7.058	1	0.008
[Country_Relevance=Cyprus]	-0.078	0.1959	-0.462	0.306	0.160	1	0.690
[Country_Relevance=Czech]	0.283	0.1891	-0.088	0.654	2.241	1	0.134
[Country_Relevance=Denmark]	-0.817	0.2165	-1.241	-0.393	14.237	1	0.000
[Country_Relevance=Estonia]	-0.506	0.2059	-0.910	-0.103	6.043	1	0.014
[Country_Relevance=Finland]	0.143	0.1914	-0.232	0.518	0.559	1	0.455
[Country_Relevance=France]	-0.254	0.1987	-0.644	0.135	1.639	1	0.201
[Country_Relevance=Germany]	-1.369	0.2421	-1.844	-0.895	31.987	1	0.000
[Country_Relevance=Greece]	0.363	0.1890	-0.007	0.734	3.696	1	0.055
[Country_Relevance=Hungary]	0.043	0.1927	-0.335	0.420	0.049	1	0.825
[Country_Relevance=Ireland]	-0.350	0.2015	-0.744	0.045	3.012	1	0.083
[Country_Relevance=Italy]	0.512	0.1875	0.145	0.880	7.470	1	0.006
[Country_Relevance=Latvia]	-0.312	0.2002	-0.704	0.081	2.426	1	0.119
[Country_Relevance=Lithuania]	-1.685	0.2679	-2.210	-1.160	39.541	1	0.000
[Country_Relevance=Luxembourg]	-0.162	0.1964	-0.547	0.223	0.682	1	0.409
[Country_Relevance=Malta]	0.148	0.1924	-0.229	0.525	0.591	1	0.442
[Country_Relevance=Netherlands]	-1.213	0.2337	-1.671	-0.755	26.933	1	0.000
[Country_Relevance=Poland]	-0.156	0.1963	-0.540	0.229	0.628	1	0.428
[Country_Relevance=Portugal]	0.635	0.1875	0.267	1.002	11.453	1	0.001
[Country_Relevance=Slovakia]	-0.949	0.2219	-1.384	-0.514	18.273	1	0.000
[Country_Relevance=Slovenia]	-0.251	0.1990	-0.641	0.139	1.595	1	0.207
[Country_Relevance=Spain]	-0.776	0.2148	-1.197	-0.355	13.065	1	0.000
[Country_Relevance=Sweden]	-0.567	0.2080	-0.974	-0.159	7.421	1	0.006
[Country_Relevance=United Kingdom]	0[a]	.	.	.	.	.	.
Number_of_Recitals	-0.065	0.0110	-0.086	-0.043	34.555	1	0.000
Time_Transpose_Months	-0.020	0.0094	-0.039	-0.002	4.699	1	0.030
TN	0.005	0.0007	0.004	0.007	54.945	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Country_Relevance, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = Amendment

New Directives- Sectors, Countries

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	-2.682	0.2555	-3.183	-2.181	110.192	1	0.000
[Commission_Council_CP=0]	0.614	0.1237	0.372	0.856	24.646	1	0.000
[Commission_Council_CP=1]	-0.326	0.0964	-0.515	-0.137	11.418	1	0.001
[Commission_Council_CP=2]	0[a]	.	.	.	.	.	.
[Country_Relevance=Austria]	0.009	0.2776	-0.535	0.553	0.001	1	0.974
[Country_Relevance=Belgium]	0.463	0.2786	-0.083	1.009	2.762	1	0.097
[Country_Relevance=Cyprus]	0.387	0.2763	-0.154	0.929	1.963	1	0.161
[Country_Relevance=Czech]	0.379	0.2753	-0.160	0.919	1.900	1	0.168
[Country_Relevance=Denmark]	-0.672	0.2916	-1.243	-0.100	5.302	1	0.021
[Country_Relevance=Estonia]	0.258	0.2757	-0.282	0.799	0.878	1	0.349
[Country_Relevance=Finland]	0.027	0.2782	-0.518	0.573	0.010	1	0.922
[Country_Relevance=France]	0.501	0.2789	-0.045	1.048	3.231	1	0.072
[Country_Relevance=Germany]	-0.135	0.2783	-0.681	0.410	0.237	1	0.627
[Country_Relevance=Greece]	0.975	0.2859	0.415	1.535	11.627	1	0.001
[Country_Relevance=Hungary]	0.002	0.2757	-0.539	0.542	0.000	1	0.995
[Country_Relevance=Ireland]	-0.142	0.2817	-0.694	0.410	0.254	1	0.614
[Country_Relevance=Italy]	0.863	0.2833	0.308	1.418	9.284	1	0.002
[Country_Relevance=Latvia]	-0.304	0.2800	-0.853	0.245	1.178	1	0.278
[Country_Relevance=Lithuania]	-0.270	0.2813	-0.821	0.281	0.921	1	0.337
[Country_Relevance=Luxembourg]	0.585	0.2795	0.037	1.133	4.382	1	0.036
[Country_Relevance=Malta]	0.433	0.2758	-0.107	0.974	2.469	1	0.116
[Country_Relevance=Netherlands]	-0.290	0.2797	-0.838	0.259	1.071	1	0.301
[Country_Relevance=Poland]	0.181	0.2746	-0.357	0.719	0.435	1	0.510
[Country_Relevance=Portugal]	1.055	0.2878	0.491	1.619	13.434	1	0.000
[Country_Relevance=Slovakia]	-0.064	0.2771	-0.607	0.479	0.053	1	0.817
[Country_Relevance=Slovenia]	0.017	0.2763	-0.525	0.558	0.004	1	0.952
[Country_Relevance=Spain]	0.187	0.2780	-0.358	0.732	0.451	1	0.502
[Country_Relevance=Sweden]	0.332	0.2785	-0.214	0.878	1.421	1	0.233
[Country_Relevance=United Kingdom]	0[a]	.	.	.	.	.	.
Number_of_Recitals	0.057	0.0061	0.045	0.069	85.751	1	0.000
Time_Transpose_Months	0.097	0.0088	0.080	0.115	123.603	1	0.000
TN	-0.002	0.0003	-0.002	-0.001	21.755	1	0.000
(Scale)	1[b]						

Dependent Variable: Reported as Transposed on time?

Model: (Intercept), Commission_Council_CP, Country_Relevance, Number_of_Recitals, Time_Transpose_Months, TN

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

c. New- 1, Amendment- 0 = New

APPENDIX 2

Correlations

Overall

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.441**	.801**
	Sig. (2-tailed)		0.000	0.000
	N	9678	9678	9678
# of recitals	Pearson Correlation	.441**	1	.788**
	Sig. (2-tailed)	0.000		0.000
	N	9678	9678	9678
Time*Recital	Pearson Correlation	.801**	.788**	1
	Sig. (2-tailed)	0.000	0.000	
	N	9678	9678	9678

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Employment Correlations[a]

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.242**	.822**
	Sig. (2-tailed)		0.000	0.000
	N	323	323	323
# of recitals	Pearson Correlation	.242**	1	.638**
	Sig. (2-tailed)	0.000		0.000
	N	323	323	323
Time*Recital	Pearson Correlation	.822**	.638**	1
	Sig. (2-tailed)	0.000	0.000	
	N	323	323	323

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Energy & Transport Correlations[a]

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.630**	.843**
	Sig. (2-tailed)		0.000	0.000
	N	1120	1120	1120
# of recitals	Pearson Correlation	.630**	1	.911**
	Sig. (2-tailed)	0.000		0.000
	N	1120	1120	1120
Time*Recital	Pearson Correlation	.843**	.911**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1120	1120	1120

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Enterprise Correlations[a]

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.555**	.802**
	Sig. (2-tailed)		0.000	0.000
	N	1955	1955	1955
# of recitals	Pearson Correlation	.555**	1	.821**
	Sig. (2-tailed)	0.000		0.000
	N	1955	1955	1955
Time*Recital	Pearson Correlation	.802**	.821**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1955	1955	1955

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Environment Correlations[a]

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.366**	.777**	
	Sig. (2-tailed)		0.000	0.000	
	N	661	661	661	
# of recitals	Pearson Correlation	.366**	1	.799**	
	Sig. (2-tailed)	0.000		0.000	
	N	661	661	661	
Time*Recital	Pearson Correlation	.777**	.799**	1	
	Sig. (2-tailed)	0.000	0.000		
	N	661	661	661	

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = FJS Correlations[a]

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.483**	.818**	
	Sig. (2-tailed)		0.000	0.000	
	N	385	385	385	
# of recitals	Pearson Correlation	.483**	1	.803**	
	Sig. (2-tailed)	0.000		0.000	
	N	385	385	385	
Time*Recital	Pearson Correlation	.818**	.803**	1	
	Sig. (2-tailed)	0.000	0.000		
	N	385	385	385	

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Health & Consumers Correlations[a]

	Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.287**	.703**
	Sig. (2-tailed)		0.000	0.000
	N	3824	3824	3824
# of recitals	Pearson Correlation	.287**	1	.800**
	Sig. (2-tailed)	0.000		0.000
	N	3824	3824	3824
Time*Recital	Pearson Correlation	.703**	.800**	1
	Sig. (2-tailed)	0.000	0.000	
	N	3824	3824	3824

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Internal Market Correlations[a]

	Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.262**	.780**
	Sig. (2-tailed)		0.000	0.000
	N	1002	1002	1002
# of recitals	Pearson Correlation	.262**	1	.654**
	Sig. (2-tailed)	0.000		0.000
	N	1002	1002	1002
Time*Recital	Pearson Correlation	.780**	.654**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1002	1002	1002

**. Correlation is significant at the 0.01 level (2-tailed).

Sector = Tax & Customs Correlations[a]

		Time to transpose-months	# of recitals	Time*Recital	
Time to transpose-months	Pearson Correlation	1	.428**		.647**
	Sig. (2-tailed)		0.000		0.000
	N	408	408		408
# of recitals	Pearson Correlation	.428**	1		.952**
	Sig. (2-tailed)	0.000			0.000
	N	408	408		408
Time*Recital	Pearson Correlation	.647**	.952**		1
	Sig. (2-tailed)	0.000	0.000		
	N	408	408		408

**. Correlation is significant at the 0.01 level (2-tailed).

BIBLIOGRAPHY

Anderson, Jeffrey J. "Europeanization and the Transformation of the Democratic Polity, 1945-2000." *JCMS* 40.5 (2002): 793-822. Print.

Barroso, Jose Manuel, President of the European Commission. *When the Successes of the Past Meet the Challenges of the Future*., March 24, 2007. Web. March 1, 2011.

Berglund, Sara, Ieva Gange, and Frans van Waarden. "Mass Production of Law. Routinization in the Transposition of European Directives: A Sociological-Institutionalist Account." *Journal of European Public Policy* 13.5 (2006): 692-716. Print.

Bergman, Torbjörn. "The European Union as the Next Step of Delegation and Accountability." *European Journal of Political Research* 37.3 (2000): 415-29. Print.

Börzel, Tanja A., et al. "Recalcitrance, Inefficiency and Support for European Integration: Why Member States do (Not) Comply with European Law." *CES Working Paper* Paper 151 (2007) Print.

Börzel, Tanja A., Tobias Hofmann, and Carina Sprungk. "Why Do States Not Obey the Law? Lessons from the European Union". *Paper prepared for the EUSA Conference.* March 27-30, Nashville. 2003. Print.

Börzel, Tanja A. "Mind the Gap! European Integration Between Level and Scope." *Journal of European Public Policy* 12.2 (2005): 217-36. Web.

---. "Non-Compliance in the European Union: Pathology Or Statistical Artefact?" *Journal of European Public Policy* 8.5 (2001): 803-24. Web.

---. "Pace-Setting, Foot-Dragging, and Fence-Sitting: Member State Responses to Europeanization." *Journal of Common Market Studies* 40.2 (2002): 193-214. Web.

---. "Towards Convergence in Europe? Institutional Adaptation to Europeanization in Germany and Spain." *Journal of Common Market Studies* 37.4 (1999): 573-96. Print.

Börzel, Tanja, and Thomas Risse. "Conceptualizing the Domestic Impact of Europe." *The Politics of Europeanization.* Eds. Kevin Featherstone and Claudio M. Radaelli. Oxford: Oxford University Press, 2003. 352. Print.

Brannick, Michael T. "Logistic Regression." *Logistic Regression.* n.d.Web. <http://luna.cas.usf.edu/~mbrannic/files/regression/Logistic.html>.

Checkel, Jeffrey, and Andrew Moravcsik. "A Constructivist Research Program in EU Studies?" *European Union Politics* 2.2 (2001): 219-49. Print.

Checkel, Jeffrey. "Social Construction and Integration." *Journal of European Public Policy* 6.4 (1999): 545-60. Print.

Christiansen, Thomas, Knud Erik Jorgensen, and Antje Wiener. "The Social Construction of Europe." *Journal of European Public Policy* 6.4 (1999): 528-44. Print.

Connor, Edward F. "Logistic Regression." 9/26/2002 2002.Web. <http://userwww.sfsu.edu/~efc/classes/biol710/logistic/logisticreg.htm>.

Dimitrova, Antoaneta, and Mark Rhinard. "The Power of Norms in the Transposition of EU Directives." *European Integration online Papers (EIoP)* 9.16 (2005): September 9, 2010. Web.

Ebbinghause, B., and J. Visser. "European Labour and Transnational Solidarity: Challenges, Pathways, and Barriers." *European Integration in Social and Historical Perspective : 1850 to the Present.* Eds. Jytte Klausen and Louise Tilly. Lanham, Md.: Rowman & Littlefield Publishers, 1997. 195-221. Web.

Eisenhardt, Kathleen, and Melissa E. Graebner. "Theory Building from Cases: Opportunities and Challenges." *Academy of Management Journal* 50.1 (2007): 25-32. Print.

European Commission. "Application of EU law- Infringements of EU Law." *European Commission- Application of EU Law.* 12/09/2010.Web. Secretariat-General. <http://ec.europa.eu/eu_law/infringements/infringements_en.htm>.

---. "Application of EU law- What are Directives?" 12/9/2010 2010.Web. <http://ec.europa.eu/eu_law/introduction/what_directive_en.htm>.

"European Integration." November 11, 2011 2011.Web. <http://en.wikipedia.org/wiki/European_integration>.

European Union. "Basic Information on the European Union." n.d.Web. <http://europa.eu/about-eu/basic-information/index_en.htm>.

Falkner, Gerda, et al. *Complying with Europe: EU Harmonisation and Soft Law in the Member States*. Cambridge: Cambridge University Press, 2005. Print.

Falkner, Gerda, and Oliver Treib. "Three Worlds of Compliance Or Four? the EU-15 Compared to the New Member States." *Journal of Common Market Studies* 46.2 (2008): 293-313. Print.

Falkner, Gerda, et al. "Non-Compliance with EU Directives in the Member States:Opposition through the Backdoor?" *West European Politics* 27.3 (2004): 452-73. Web.

Fearon, James D. "Bargaining, Enforcement, and International Cooperation." *International Organization* 52.02 (1998): 269. Web.

Finnemore, Martha, and Kathryn Sikkinka. "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics." *Annual Review of Political Science* 4 (2001): 391-416. Print.

Follesda, Andreas, and Simon Hix. "Why There is a Democratic Deficit in the EU: A Response to Majone and Moravcsik." *Journal of Common Market Studies* 44.5 (2006): 533-62. Print.

Gange, Ieva, and Frans van Waarden. "A Sociological-Institutionalst Approach to the Riddle of Transposition Delays of European Food Safety Directies". *European Union Studies Association.* March 31 - April 3, 2005, Austin, Texas. Print.

Hartlapp, Miriam, and Gerda Falkner. "Problems of Operationalization and Data in EU Compliance Research." *Journal of European Public Policy* 10.2 (2009): 281-304. Print.

Haverland, Markus, and Marleen Romeijn. "Do Member States make European Policies Work? Analysing the EU Transposition Deficit." *Public Administration* 85.3 (2008): 757-78. Print.

Haverland, Markus, Bernard Steunenberg, and Frans van Waarden. "Sectors at Different Speeds: Analysing Transposition Deficits in the European Union." *Journal of Common Market Studies* (2010): 1-27. Print.

Haverland, Markus. "National Adaptation to European Integration: The Importance of Institutional Veto Points." *Journal of Public Policy* 20.1 (2000): 83-103. Web.

Héritier, Adrienne. "The Accommodation of Diversity in European Policy-Making and its Outcomes: Regulatory Policy as a Patchwork." *Journal of European Public Policy* 3.2 (1996): 149-67. Web.

Jackson, Robert, and Georg Sørensen, eds. *Introduction to International Relations: Theories and Approaches*. 4th ed. Oxford: Oxford University Press, 2010. Print.

Jupille, J., and J. A. Caporaso. "Institutionalism and the European Union: Beyond International Relations and Comparative Politics." *Annual Review of Political Science* 2 (1999): 429-44. Print.

Kaeding, Michael. "Determinants of Transposition Delay in the European Union." *Journal of Public Policy* 26.3 (2006): 229. Web.

---. "In Good Times and Bad: Legal Transposition in the European Union. Assessing Correlational and necessary/sufficient Causation." *German Working Papers in Law and Economics* 2006.Paper 29 (2006) Web.

Knill, Christoph, and Dirk Lehmkuhl. "How Europe Matters: Different Mechanisms of Europeanization." *European Integration online Papers (EIoP)* 3.7 (1998). Web.

Knill, Christoph, and A. Lenschow. "Change as 'Appropriate Adaptation': Administrative Adjustment to European Environmental Policy in Britain and Germany." *European Integration online Papers (EIoP)* 2.1 (1998): 1-25. Print.

Knill, Christoph, and Jale Tosun. "Post-Accession Transposition of EU Law in the New Member States: A Cross-Country Comparison." *European Integration online Papers (EIoP)* 13. Special Issue 2 (2009). Web.

König, T., and B. Luetgert. "Troubles with Transposition? Explaining Trends in Member-State Notification and the Delayed Transposition of EU Directives." *British Journal of Political Science* 39.1 (2009): 163. Web.

Lampinen, Risto, and Petri Uusikyla. "Implementation Deficit - Why Member States do Not Comply with EU Directives?" *Scandinavian Political Studies* 21.3 (1998): 231-51. Print.

Lichbach, Mark Irving, and Alan S. Zuckerman, eds. *Comparative Politics: Rationality, Culture, and Structure*. Cambridge: Cambridge University Press, 1997. Print.

March, James G., and Johan P. Olsen. The Logic of Appropriatness. University of Oslo, Sweden: Arena Center for European Studies, 2009.

Mastenbroek, Ellen. "Surviving the Deadline: The Transposition of EU Directives in the Netherlands." *European Union Politics* 4.4 (2003): 371-95. Web.

Mastenbroek, Ellen. "EU Compliance: Still a 'Black Hole'?" *Journal of European Public Policy* 12.6 (2005): 1103-20. Web.

Mbaye, Heather. "Why National States Comply with Supranational Law: Explaining Implementation Infringements in the European Union, 1972-1993." *European Union Politics* 2.3 (2001): 259-81. Web.

Merand, Frederic, *European Defence Policy: Beyond the Nation State*, 2008.

Moravcsik, Andrew. "Is Something Rotten in the State of Denmark? Constructivism and European Integration." *Journal of European Public Policy* 6.4 (1999): 669-81. Print.

Olsen, Johan P. "The Many Faces of Europeanization." *Journal of Common Market Studies* 40.5 (2002): 921-52. Print.

Perkins, Richard, and Eric Neumayer. "Do Membership Benefits Buy Regulatory Compliance?: An Empirical Analysis of EU Directives 1978-99." *European Union Politics* 8 (2007): 180-206. Web.

Radaelli, Claudio M. "Whither Europeanization? Concept Stretching and Substantive Change." *European Integration online Papers (EIoP)* 4.8 (2000).Web.

Ronan, Sean G, Director-General for Press and Information, Commission of the European Communities. "The European Community and its Future Influence in the World". *23rd World Conference of International Advertising Associations.* June 8-13, 1973, Dublin. *Archive of European Integration (AEI).* Web. March 1, 2011.

San Francisco State University. 09/26 2002.Web. <http://userwww.sfsu.edu/~efc/classes/biol710/logistic/logisticreg.htm>.

Sandholtz, Wayne, and Alec Stone Sweet, eds. *European Integration and Supranational Governance*. Oxford: Oxford University Press, 1998. Print.

Scharpf, Fritz. "The Joint-Decision Trap: Lessons from German Federalism and European Integration." *Public Administration* 66 (1988): 239-78. Print.

Schimmelfennig, Frank, and Florian Trauner. "Introduction: Post-Accession Compliance in the EU's New Member States." *European Integration online Papers (EIoP)* 13.Special Issue 2 (2009). Print.

Sedelmeier, Ulrich. "After Conditionality: Post-Accession Compliance with EU Law in East Central Europe." *Journal of European Public Policy* 15.6 (2008): 806-25. Web.

---. "Post-Accession Compliance with EU Gender Equality Legislation in Post-Communist New Member States." *European Integration online Papers (EIoP)* 13 (2009). Print.

Sikkink, Kathryn. "Human Rights, Principled Issue-Networks, and Sovereignty in Latin America." *International Organization* 47.3 (1993): 411-41. Print.

Steunenberg, Bernard, and Michael Kaeding. "'as Time Goes by': Explaining the Transposition of Maritime Directives." *European Journal of Political Research* 48 (2009): 432-54. Print.

Steunenberg, Bernard, and Dimiter Toshkov. "Comparing the Transposition of the 27 Member States of the EU: The Impact of Discretion and Legal Fit." *Journal of European Public Policy* 16.7 (2009): 951-70. Print.

Steunenberg, Bernard. "A Policy Solution to the European Union's Transposition Puzzle: Interaction of Interests in Different Domestic Arenas." *West European Politics* 30.1 (2007): 23-49. Print.

Stone Sweet, Alec, and Wayne Sandholtz. "Integration, Supranational Governance, and the Institutionalization of the European Polity." *European Integration and Supranational Governance.* Eds. Wayne Sandholtz and Alec Stone Sweet. Oxford: Oxford University Press, 1998. Print.

Tallberg, Jonas. "Paths to Compliance: Enforcement, Management, and the European Union." *International Organization* 56.03 (2002): 609. Web.

Toshkov, Dimiter. "Embracing European Law: Compliance with EU Directives in Central and Eastern Europe." *European Union Politics* 9.3 (2008): 379-402. Print.

---. "Embracing European Law: Compliance with EU Directives in Central and Eastern Europe." *European Union Politics* 9.3 (2008): 379-402. Print.

---. "Taking Stock: A Review of Quantitative Studies of Transposition and Implementation of EU Law." *Institute for European Integration Research* 9 (2008) Print.

Treaty of European Union. 1993. Print.

Treib, Oliver. "Implementing and Complying with EU Governance Outputs." *Living Reviews in European Governance* 3.5 (2008)Web. 10/4/2011.

Treutlein, Daniela. *What Actually Happens to EU Legislation in the Member States?*, 2007. Print.

Vink, Maarten. *What is Europeanization? and Other Questions on a New Research Agenda*. Paper for the Second YEN Research Meeting on Europeanization Vol. University of Bocconi, Milan, 22-23 November:, 2002. Web.

Wendt, Alexander. *Social Theory of International Politics*. Cambridge: Cambridge University Press, 1999. Print.