Of Courts and Commerce:
Reconsidering evidence from the European Court of Justice

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Paper prepared for presentation at the PEIO, Washington DC, January 28-30, 2010.

Abstract: Membership in the European Union involves a commitment to economic liberalization regarding the movement of goods, services, capital, and labor. But what the treaty articles and secondary legislation mean in practice—particularly when brought into conflict with national laws--depends on judicial interpretation by the European Court of Justice (ECJ). Stone Sweet and his collaborators (Stone Sweet 2004; Stone Sweet and Brunell 1999; Fligstein and Stone Sweet 2002; Stone Sweet and Caporaso 1998) argue that the European Court of Justice's rulings have played an important role in completing the internal market through market liberalizing rulings. Specifically, they argue that the increased use of the preliminary reference procedure over time provided the ECJ with greater opportunities to rule on the validity of national barriers to free movement and this in turn produced increasing exchange of goods among the member states. We test this proposition with a novel dataset. The results strongly support the argument of Stone Sweet. They indicate that, on average, market-liberalizing rulings on preliminary references systematically increase future levels of intra-EU imports. Moreover, this effect is not temporary; it has a long-run expansionary effect on trade among the EU member-states. However, we do not find evidence of the opposite relationship, that trade drives preliminary rulings.

One of the most important roles courts play in any political system is the enforcement of contracts. This is particularly true of laws governing inter-state economic activity. In 1787, the U.S. constitutional convention created the Supreme Court and empowered it with the right to hold actions by state governments inconsistent with the federal regulatory regime invalid. This power was granted to the Court specifically because of the tendency of states under the Articles of Confederation to burden inter-state trade. The arbitrating body of the WTO/GATT is charged with ruling on potential violations of inter-state commerce laws established to promote free trade. And, the European Court of Justice, created in 1959, was tasked with hearing cases of possible violations of European common market policy in the European Economic Community.

How well do courts fulfill this function? This question is receiving significant attention among scholars studying international courts. Some scholars believe that these courts are quite effective. For example, studies of the WTO/GATT have found that members of the WTO are less likely to be targeted with antidumping duties by the U.S. (Busch, Raciborski, and Reinhardt 2009), and that among those members, countries with a greater legal capacity to use WTO arbitration are less likely to be subject to antidumping measures as well (Busch, Reinhardt, and Shaffer 2007). Similarly, studies of the European Court of Justice find that the Court has been one of the critical engines driving the process of European economic integration (Burley and Mattli 1993; Alter 1998, 2001). These scholars use historical case studies to map out the evolution and implementation of case law over time for evidence.

Other scholars take a much more cynical view of these courts. Rose (2003, 2004), Gowa and Kim (2005), Bagwell and Staiger (2002), and Mavroidis (2000) all argue that the

WTO trade regime has had little impact on state behavior, while Garrett and Weingast (1993), Garrett (1995), Garrett, Kelemen, and Schulz (1998), and Carrubba, Gabel, and Hankla (2009) all argue that the capacity of the ECJ to influence member state behavior is highly constrained.

Importantly, almost all of the evidence in support of a judicial effect on commerce is indirect.[1] The primary exception among studies of the WTO/GATT is a paper by Bown (2004a). Citing existing arguments, Bown states that if the GATT/WTO is treated as a commitment device, then a guilty verdict may provide the necessary political cover for the government to commit to trade liberalization. Bown finds that a determination of guilt by the arbitrating body does increase the defendant state's imports in the good affected by the decision. While highly suggestive, this evidence is unavoidably limited – with only sixty-four observations – and the sample only includes cases with developing nations as plaintiffs. Further, Bown also finds no effect of a guilty determination in a separate study (Bown 2004b).

The primary exception among studies of the ECJ is a series of papers by Stone Sweet and his collaborators (Stone Sweet 2004; Stone Sweet and Brunell 1999; Fligstein and Stone Sweet 2002; Stone Sweet and Caporaso 1998). Stone Sweet contends the ECJ has consistently promoted supranational norms and rules at the expense of national laws. This is a result of rulings by the ECJ on questions referred to it by national courts that raise questions regarding the compatibility of national laws with EC treaty provisions and secondary legislation.

[1] Studies of antidumping are limited in that they do not allow for the possibility that other forms of protection might be employed, and therefore that actual effects on trade might be negligible, even if antidumping duties are reduced.

This argument, while plausible, has not endured serious empirical scrutiny. Stone Sweet and Brunell (1999) and Fligstein and Stone Sweet (2002) showed that trade among the EU member states has expanded in almost perfect coincidence with increases in the number of questions referred to the ECJ by national courts. But this coincidence is at best suggestive evidence.[2] More recent studies have examined the temporal relationship between the trend in intra-EU trade and the trend in preliminary references, but these studies suffer from a variety of measurement and modeling problems (EUP pieces in bib).

In this paper, we employ a novel data set of ECJ rulings that allows us to provide a uniquely rigorous test of whether Court decisions affect inter-state trade. The ECJ provides an attractive venue in which to study this question for two reasons. First, unlike other international courts, cases against member states come to the court through two different mechanisms, infringement proceedings and preliminary rulings. Infringement proceedings are the types of cases typical to other international courts; member states are brought directly to the ECJ for violations of EU law by other member states or the Commission. Preliminary rulings, in contrast, are more like national law; private litigants bring challenges against state behavior to national courts and it is those courts that ask for and then implement the ECJ decision. While previous studies have examined the effect of preliminary rulings on trade, none have looked at infringements. By examining both, we can evaluate to what degree the effect of ECJ decisions depends upon the mechanism by which the case arises. Further, examining infringements in addition to preliminary rulings

[2] And, when controls for EU legislative activity are included, Fligstein and Stone Sweet (2002) show that references, lagged one year, do not have a statistically significant effect on trade.

allows us to determine whether a mechanism that looks like other international courts has a substantive effect as well.

Second, as we asserted above, relying upon our novel data set we can perform a uniquely rigorous test of the link between court rulings and trade. First, we need to establish that ECJ decisions in favor of integration are positively correlated with increased trade. We have coded ECJ decisions between 1970 and 1993 for each legal issue addressed in each case. We also have coded all Commission interventions, by legal issue, and whether the interventions were on behalf of the plaintiff or the defendant.[3] This data allows us to exam whether a decision in favor of integration, as proxied for by the Commission position, actually increases trade. We can do this over all infringement proceedings and preliminary ruling cases over this time period. Second, we need to establish that this relationship is not spuriously driven by some third factor that is correlated with both trade and ECJ decisions. Here we rely upon a highly demanding set of controls for country and year fixed effects. These fixed effects are important because this type of data is unusually vulnerable to omitted variable bias. Finally, we need to establish that this relationship is not actually a product of reverse causation; that is, we need to be sure that pro-integration ECJ decisions are increasing trade and not vice versa. For a variety of reasons detailed subsequently, we can do this by examining not just if ECJ decisions and trade are correlated, but the timing of that relationship as well. If ECJ decisions are driving trade, then we should observe the trade effect arising subsequent to the decision, not concurrently with it.

I. The European Court of Justice and Regulation of State Behavior

[3] The full data set covers 1960-1999, but for a variety of reasons explained later the most reliable sample for this test is 1970-1993.

The founding treaties assigned the ECJ the authority to adjudicate claims of alleged national violations of treaty obligations through infringement proceedings. These challenges to state action, commonly referred to as "direct actions", can be brought by the Commission under article 258 of the Treaty on the European Union, or a member state under article 259 of Treaty on the European Union. While either the Commission or a member state can bring a case, the vast majority are brought by the Commission. Challenges are generally one of two types; member states are brought to Court because they have failed to transcribe EU directives into national law,[4] or the member states are engaging in behavior inconsistent with EU treaties and regulations. These cases obviously afford the ECJ an opportunity to interpret the meaning of the treaties and rule on the validity of national law.

In addition, the ECJ can review the compatibility of national statutes and other legal instruments with EC law through the preliminary ruling system. This was not the original intent of this procedure. As Alter (2001) describes, the preliminary ruling system initially was designed to allow national litigants to question and constrain the authority of the EC institutions. However, over time, the procedure was transformed into a decentralized enforcement mechanism, where national laws could be challenged for their compatibility with EC obligations.

The ECJ initiated this transformation through the assertion of two doctrines, direct effect and supremacy. Direct effect, first asserted in *Van Gend en Loos v. Nederlandse Administratie der Belastingen* (1963), stated that EU laws should be directly applicable in national courts. Supremacy, first asserted in *Costa v. ENEL* (1964), stated that national laws that came into conflict with EU law, whether passed prior to or after the EU law came into

[4] Member states are accused of failing to transcribe the laws in a timely manner or of incorrectly transcribing the laws.

effect, would be null and void. Together, these doctrines implied that litigants in national courts could raise issues of EC law in their defense. The national judge then had two choices. If the national judge felt that EU law applied, but some clarification was necessary, the judge could pose questions about the relevant law in the form of a preliminary ruling. The ECJ's responses then could be used in rendering a final decision. Otherwise the national judge could simply enforce EC law through national cases as s/he wished.

Of course, the assertion of these doctrines did not make them relevant. First, national judges (and high courts) would need to accept them. Very few national judges made referrals to the ECJ in the early years. But over the last thirty years, the number of preliminary references has grown dramatically. Indeed, the most common type of case heard by the ECJ is now typically a preliminary reference. This timing of acceptance by national high courts varied across countries but was essentially complete by the late 1980s. By then the ECJ was regularly receiving preliminary references from all the member states, although in varying quantities (figures 1).

Second, for ECJ decisions on preliminary rulings to matter, national judges would have to actually implement the opinions of the ECJ. The best evidence to date indicates that national judges did in fact implement the ECJ's preliminary rulings in their final decisions, even when the ruling requires dis-applying national laws (Nyikos 2003).

Finally, for preliminary rulings to be an effective mechanism by which to influence liberalization of the internal market, the scope of cases referred would have to expand with the expanding jurisdiction of the EU. SS-B (1999: 72) showed that most preliminary references in the early years primarily involved the exchange of goods: agriculture and the free movement of goods. But, over time, the share of cases that directly involved the

exchange of goods declined in favor of issue areas (e.g., environmental and consumer protection) that are often associated with non-tariff barriers to trade. Thus, the composition of cases did in fact offer the ECJ opportunities to review a broad range of national rules and laws that might constrain market liberalization.

The importance of the rise of preliminary references goes well beyond the sheer number of disputes the ECJ addresses. To see this, consider two crucial differences between the infringement procedure and the preliminary ruling system. First, the number and target of infringement proceedings is influenced by the capacity of the Commission and its political considerations. As a consequence, only a small fraction of suspected violations identified by the Commission at the administrative stage are ever prosecuted before the ECJ. In contrast, the capacity for generating cases through the preliminary reference system is determined by the resources of litigants and the willingness of national judges to engage the ECJ. Of course, not all national judges or litigants were originally aware of the relevance of EC law. This certainly limited referrals in the early years. And, not all national judges were convinced that the ECJ should review its cases and the compatibility of national law with EC law. But to the extent national judges recognize the authority of the ECJ and litigants have a stake in EU law being enforced over national law, the preliminary reference procedure has the potential to provide a great deal of opportunities for the ECJ to interpret EC law.

Second, infringement proceedings conclude with a declaratory ruling regarding a member-state action or law, but there is no penalty and no explicit enforcement mechanism. In contrast, the preliminary reference procedure ends with a national judge concluding a controversy in a national court. In that setting, the judgment benefits from

the legal and enforcement system in a member state. Typically, national governments will face greater political costs from ignoring or violating the ruling of a national court than of the ECJ. Thus, to the extent national judges accept preliminary rulings as part of their adjudication, the preliminary reference procedure allows the ECJ to borrow on the enforcement powers of national courts and legal systems.

That said, the fact that the preliminary reference system has provided an increasing number of cases regarding national laws that might restrict the completion of the internal market does not mean that preliminary rulings served to remove such impediments. We could imagine a variety of reasons why the ECJ might not favor market liberalization in some instances. Carrubba, Gabel, and Hankla (2008) show, for example, that the ECJ is sensitive to the interests of the member-state governments in its preliminary rulings. In principle, those interests may not always support market liberalization.

II. Theories of Judicial Influence

Within the ECJ literature, the main argument for how ECJ rulings should affect trade is made by Stone Sweet and Brunell (1999)—henceforth SS-B. The argument goes as follows. Inter-state exchange raises conflict between national and EC law. This conflict drives parties that would benefit from a reduction in national trade barriers to raise challenges to national law in domestic courts. The national courts then call upon the ECJ to clarify EU law and, because the ECJ has a variety of incentives to promote EU law over national law, the ECJ generally resolves these conflicts so as to liberalize inter-state commerce. This resolution of existing conflicts reduces uncertainty in the application of internal market

law, which increases firm incentives to exploit the internal market, which in turn generates more controversies. As a result, SS-B argue that we observe an expansion in trade among the member states and the development of a network of judges and litigants that regularly engage the ECJ with questions about the applicability of national law in light of EU obligations. [5]

While SSB provides a logic by which use of the preliminary ruling system should increase trade, no equivalent logic has been developed for infringement proceedings within the EU literature. That said, a general logic can be applied from the wider literature on international organizations. As Bown (2004a) states, some scholars have argued that international agreements can be used as commitment devices by governments. To the degree that this is true, pro-liberalization decisions on infringements by the ECJ should be obeyed, and therefore again lead to increases in trade.

III. The Extant Evidence

Several studies have attempted to test empirically whether preliminary rulings cause increased intra-EU trade. In reviewing this evidence, it is worth briefly taking note of the specific empirical expectations of the argument described above. First, the claim is that pro-integration preliminary rulings will lead to increased exchange of goods. This should be most relevant within the national setting that was the source of the preliminary reference. Furthermore, the primary effect should be on imports, since generally only national rules concerning imports can be contested in a national court. Second, the effect

[5] Dehousse (1998) makes a similar argument with regard to the impact of the ECJ on economic integration.

on intra-EU imports should be subsequent to the preliminary ruling, perhaps by several years. Recall that, after the publication of the preliminary ruling, the national court disposes of the case that generated the reference. Thus, the immediate effect of the preliminary ruling on the parties to the case and the broader effect on other economic actors are after (possibly years after!) the publication of the ruling.

To date, all studies of the effect of preliminary rulings on trade have estimated the relationship between preliminary *references* and trade (Stone Sweet 2004; Stone Sweet and Brunell 1999; Fligstein and Stone Sweet 2002; Stone Sweet and Caporaso 1998; Pitarkis and Tridimas 2003; Wind et al 2009). Figure 1 shows the two variables follow very similar temporal trends, as reported in SS-B. However, preliminary references are a poor indicator for what we want to measure: preliminary rulings. First, many references do not conclude in a preliminary ruling. They may be withdrawn, settled with an order of the court, or joined with another preliminary reference. Second, preliminary rulings in any one year are the result of preliminary references from a previous year. According to Alter (2001: 42), the delay between the reference and ruling is usually about two years. Thus, no study has yet examined in a direct sense the link between preliminary rulings and trade.

Second, we should also be concerned that the number of preliminary references in a year may not be indicative of the number of preliminary rulings that favor market liberalization. We could imagine that ECJ rulings, on average, have this effect. But should we assume that this is true consistently over time and across countries? Dehousse (1998) describes several reasons for ebbs and flows of activism by the ECJ. Thus, ideally we would like a measure of preliminary rulings that distinguishes rulings that are in favor of market integration from rulings that are not.

Third, even if preliminary references were a reasonable proxy for market liberalizing preliminary rulings, we would need to estimate an appropriately lagged effect of references on trade. If we assume a two-year delay between references and rulings and another year or two delay before the national court decides the original case, we would expect at least a four-year lag. That is, a reference from France in 1980 should affect intra-EU imports to France no earlier than 1984. The empirical estimates in SS-B and Fligstein and Stone Sweet (2002) never allow for more than a one-year lagged effect of references on trade. And, the efforts to assess Granger causality in this relationship have involved lags as far back as four years, but no longer (Pitarkis and Tridimas 2003; Wind et al 2009).

Perhaps not surprisingly, the empirical evidence to date is ambiguous. SS-B show a strong contemporaneous correlation between intra-EU trade and preliminary references, with the level of analysis the nation-year. Also analyzing the nation-year, Pitarkis and Tridimas (2003) find that references lagged two years influences current trade. But they did not allow a lag greater than two years. Wind et al (2009) find no such lagged effect after controlling for enlargement effects on trade. Fligstein and Stone Sweet (2002) do not find an independent effect of references on intra-EU trade, with a one-year lag. But their level of analysis is the issue area-year, not the nation-year.

III. Empirical Analysis

Building off of the previous discussion, we propose an alternative approach to testing for a relationship between ECJ decisions and trade. Specifically, we examine whether preliminary rulings arising in response to references from a particular country and/or infringement decisions affect the application of national law and thereby economic

exchange in that country. It is, of course, possible that these decisions have more general effects, particularly over the long haul. Thus, we will examine both short-run and long-run effects of Court decisions.

Consistent with most past research, we use the nation-year as our unit of observation. We do this for specific reasons. Rulings should have their most substantial effect on the laws and behavior of the country with whom the case was raised. However, challenging a law in a national setting can have implications for the treatment of other laws and industries in that national setting as well. Thus, this approach has the advantage of isolating the country specific effect, without over-restricting it.

The data set includes observations on intra-EU imports for the original six member states (with Belgium and Luxembourg combined due to the format of available trade data) from 1970-1993. We have information about ECJ rulings prior to 1970 and will use those where necessary for lagged variables. But we are constrained to the post-1970 period by the availability of relevant economic data for constructing the dependent variable. We are constrained to the pre-1994 period by the availability of relevant information regarding the disposition of ECJ rulings in preliminary ruling cases. After 1993, the Court stopped providing a public record of all observations tendered by third parties on a case. These observations are the source of our information about whether the case was disposed in favor of the Commission. One can (see Carrubba, Gabel, and Hankla 2008) infer the positions of observations from other sources, but these are not sufficiently complete for our purposes here. We restrict the analysis to the original six member states for estimation purposes. Our dataset involves multiple panels, which raises a variety of methodological problems that we discuss in the next section. Restricting our analysis to the original six

members provides a balanced times-series, where all member-states enter the dataset with a common history of membership. This also facilitates controlling for common shocks (e.g., enlargement). Finally, Beck (2001) recommends a time-series of at least 16 years for the estimation of panel-corrected standard errors. Thus, the 1986 (Spain and Portugal) and 1981 (Greece) accessions were too close to 1993, our last year of analysis. And, the first accession countries (United Kingdom, Denmark, and Ireland) barely meet the minimum threshold. [6]

a. Measuring Intra-EU trade (Imports)

All previous ECJ studies have focused on the effect of preliminary rulings on total intra-EU trade (exports + imports). In contrast, we focus only on intra-EU imports. We make this choice for theoretical reasons. A pro-liberalizing decision by the Court implies that a government must allow easier access to its markets. Easier access directly implies an increase in imports to that market, but it does not necessarily result in a concurrent increase in exports *from* that country into another market. We normalize imports by GDP to control for GDP effects on imports for two reasons. GDP growth has had a very strong effect on the growth of intra-EU trade (Badinger and Breuss 2004). Further, larger economies are going to have larger changes in the value of imports over time. And, the same ECJ ruling in a large economy is likely to cause a greater change in the value of imports than the same decision applied to a smaller economy. Note that we include Belgium and Luxembourg as a single country. We do this because economic data for the

[6] Note that because we rely on lagged values for rulings (as many as two or three year lags), the effective number of years of data to analyze for the 1973 accession countries is as small as 17 (1976-1993).

two countries is often reported only in aggregate. Both intra-EU imports and GDP are measured in millions of current US$. All data come from the OECD.[7]

Figure 2 summarizes the ratio of imports to GDP for each of the five countries from 1970-1993. A panel unit root test rejects the null that all five countries are non-stationary. However, notice that the ratios are different across countries. The Belgium, Luxembourg and the Netherlands have noticeably higher ratios than the other three member states. This characteristic will be accounted for in our estimation procedure.

b. Measuring Preliminary Rulings

Our first independent variable is a measure of liberalizing preliminary ruling decisions by the ECJ. As discussed above our measurement approach has several innovations over the existing literature. First, we measure actual preliminary rulings delivered by the ECJ, not preliminary references requested. This approach avoids counting cases that are settled without a ruling being made.

Second, each legal issue in a case is coded as a separate observation. Many preliminary references involve multiple legal issues, and each of these legal issues may apply to different questions of EU law and/or national law. The ECJ does not always decide a case systematically for the plaintiff or defendant, and so collapsing multiple legal issues into a single observation at a minimum introduces measurement error. Henceforth, a

[7] The data are available at the OECD website in the database "Total Trade in value by partner country (1960-2008)." The import data were adjusted for inflation based on the US consumer price index (all items) reported in the "Main Economic Indicators", also at the OECD website.

preliminary ruling refers to a preliminary ruling on a legal issue in a preliminary reference.[8]

Third, we distinguish preliminary rulings that favor market liberalization from those that do not. Consistent with SS-B, we rely upon the Commission's position on each legal issue as an indicator of the market liberalizing decision. The Commission, as the bureaucracy of the EU, is responsible for administration of EU law. This position implies that the Commission's job is to advocate for the EU's market liberalizing laws and, therefore, in general the Commission's position on any given legal issue will be the pro-liberalizing position. As SS-B summarize from work by Kilroy (1996), existing evidence is consistent with this claim. In two-thirds of Kilroy's sample (81 decisions out of 122) the court struck down national rules as treaty violations and in 86% of the cases the Court sided with the Commission. Note that the Commission's position in a case can vary based upon the specific legal issue under consideration. This fact provides yet another reason why coding at the level of the legal issue is important for the execution of this study.[9]

Figure 3 summarizes the number of pro-Commission decisions on preliminary rulings for the years 1970-1993 by country. As can be seen, these data do not exhibit non-stationarity. A Multi-Variate Augments Dickey Fuller Test and a Levin-Lin-Chu Test for cross-sectional time-series data confirm that these data are in fact stationary. That said, we do see some spikes in these data similar to those found in figure 2. For example, Belgium-Luxembourg and the Netherlands spike in imports/GDP and pro-Commission preliminary rulings both in the periods 1973-1976 and 1984-1986. These similarities could be due to

[8] For further discussion, see the description of the data in Carrubba, Gabel, and Hankla (2008).

[9] The Commission's position is available for the vast majority of the observations, over 80%, from 1960-1999, and for almost all observations in the years 1970-1993.

any number of exogenous factors, such as expansion of the EU, entrance into EMS growth in the US economy, etcetera. As such, we have reason to be concerned that common time shocks may be affecting both series and we take this issue into account in our estimation as well.

Figure 1 compares the total number of references to the number of decisions and the number of pro-Commission decisions from 1970 to 1993. As can be seen, the difference between the number of references and the other two measures only increase over time, and the references measure has a much stronger time trend. As figure 3 demonstrates, once our measures are disaggregated by country even the remaining time trend becomes negligible.

c. Measuring Infringement Proceedings

Our second independent variable is a measure of pro-liberalizing decisions in infringement cases. All of the infringement proceedings in our data are cases brought by the Commission against member states for noncompliance with EU law. Thus, by definition, the plaintiff's position in the case is both the Commission's position and the pro-liberalization position. Our coding rules are otherwise the same as with preliminary rulings.

Figure 4 illustrates the number of pro-Commission decisions on infringement proceedings for 19701-993 by country. As can be seen, the number of infringement cases the Commission won was tiny in the 1970s and then looks similar to the patterns observed in the preliminary ruling cases. While the country subject to the most pro-Commission decisions differs (Italy on infringement proceedings, Germany on preliminary rulings) both sets of series exhibit little trending. In fact, while the two variables are not highly

correlated, a regression of one on the other including controls for country produces a strong partial correlation (a coefficient of roughly .7). This observation suggests that past findings on the relationship between preliminary rulings and trade may be the result of omitted variable bias. Thus, we will account for this in our estimation strategy as well.

Table 1 provides some simple descriptive statistics on the three key variables.

d. Control Variables

Unlike previous studies we include both country and year fixed effects. First consider country effects. For obvious reasons (e.g., size of GDP and geography), the ratio of intra-EU imports to GDP is systematically greater in some member states than in others. Figure 2 illustrates this point nicely. Member states with larger GDPs, and therefore smaller ratios, also may have unusually high numbers of pro-Commission rulings. For example, larger economies might be the target of more litigants because the economic benefits of winning are simply larger. This is one of the arguments made for why Germany is targeted so much. These national cases would generate preliminary references and thereby more pro-Commission rulings all else equal, as the distinctively high number of pro-Commission decision on preliminary rulings in Germany suggest (figure 3). Thus, ignoring country fixed effects could cause omitted variable bias. Similarly, intra-EU imports may be higher or lower in any give year for reasons that would affect multiple member states simultaneously (e.g. economic shocks to the global economy). These shocks obviously thereby would affect the ratio of intra-EU imports to GDP. These shocks also could drive changes in the numbers of pro-Commission rulings. For example, an economic shock could increase pressure for government protection, which would then increase appeals to the legal system for

protection of rights and thereby preliminary references and pro-Commission rulings. The previously identified pattern of spikes in figures 2 and 3 suggests that this concern may be well grounded. We evaluate the necessity of country level and yearly fixed effects in all models with an F-test for the joint significance of the inclusion of the dummy variables.[10]

d. Model Estimation

Our theoretical expectation is that the relationship between Court rulings and intra-EU imports is dynamic: that imports respond to previous rulings and that this effect persists over time because the resulting trade liberalization endures. In this setting, a lagged dependent variable specification is appropriate (Keele and Kelly 2006). We also have good theoretical reasons and empirical evidence (figure 2) to expect the level of intra-EU imports/GDP to be serially dependent, since the behavior of economic agents (traders) is persistent and involves repeat players and learning over time. This obviously causes problems for estimation, problems that may be remedied with a lagged dependent variable. (Beck 2001; De Boef and Keele 2008). That said, unit root tests that exploit the panel nature of our data reject the null of all country series having a unit root. For robustness, we also run ECM models and all results obtain.

We are also concerned with the standard set of problems with estimating accurate standard errors using cross-sectional time-series data analysis (Beck 2001). Thus, we estimate panel-corrected standard errors and include dummy variables for all panels

[10] Note that because we are including a full slate of country and year fixed effects, there is no need to include other control variables that would only vary by country or year. For example, we do not need to include dummies for enlargement or the number of EU laws passed in a year. GDP, a theoretically relevant variable that varies by country-year, is included in the normalization of the dependent variable.

(countries) and time units (years). We should note that we have estimated equivalent models using Prais-Winsten GLS regression and error correction models and find very similar results to those described here. However, with a relatively small sample and in the absence of co-integration, we consider our approach superior to either an error correction model or the Prais-Winsten regression.

e. Results

Table 2 presents a baseline model that includes only the lagged dependent variable and the fixed effects for countries and years. Based on a Lagrange Multiplier Test assuming weakly exogenous explanatory variables, we verified that the time-series follows an AR1 process and is successfully captured by the lagged dependent variable (Beck 2001: 279). Also, we can reject the hypothesis that the fixed effects can be excluded.

Due to the inclusion of a lagged dependent variable, the coefficients on the fixed effects capture their impact on a change in the share of GDP due to intra-EU imports. Germany, for example, had on average a smaller increase in its share of GDP represented by intra-EU imports than we find in the Netherlands over this time period.[11] Thus, the fixed effects capture important substantive variation. Also, note that intra-EU trade as a portion of GDP increased with the addition of the UK, Denmark and Ireland in 1973, though not with the additions of Greece in 1981, or Spain and Portugal in 1986. Certainly the increase with the 1973 accessions is unsurprising since together these countries added a non-trivial set of exporters. In all subsequent models we control for these same fixed effects but do not report the results.

[11] Given the size of the German economy, this finding is unsurprising.

Table 3 presents the results for infringement cases. We include the contemporaneous set of rulings, as well as one and two years lagged. As can be seen, lagged pro-Commission infringement rulings either have no effect and the evidence suggests that contemporaneous rulings work in the opposite direction (i.e. more pro-Commission decisions decrease the change in intra-EU imports to GDP in that year). Thus, the evidence is inconsistent with the argument that pro-liberalizing ECJ decisions in infringement proceedings increase trade.

Table 4 presents three models testing for a relationship between the number of pro-Commission preliminary rulings in a year and the intra-EU trade over GDP ratio. In all models, our expectation is that pro-Commission preliminary rulings impact intra-EU trade for a member state two years after the ruling. As discussed earlier, the date of the ruling does not indicate the end of the judicial process. The ruling is published and the national court then disposes of the case before it. Sometimes this happens quickly, as the parties to the national case settle without a ruling (as happened in the recent and notable *Viking* ruling). But typically we would not expect an effect on trade in the immediately following year. Thus, we estimate a two-year lagged effect.

In model 1 we include the contemporaneous number of pro-Commission rulings and the one-year lag. We do so to test our assumption about the lagged effect, as recommended by De Boef and Keele (2008). In model 2 we only include the two-year lag, and in model 3 we control for the two-year lag of pro-Commission infringement decisions. We estimate model three because of the strong relationship between pro-Commission preliminary rulings and pro-Commission infringement decisions when controlling for country fixed

effects. As can be seen, only the two-year lag of pro-Commission preliminary rulings has a significant effect, and this effect is stable across the three models.

Figure 5 illustrates the over-time effect of a shock of ten pro-Commission preliminary rulings using model 2. Both the marginal and cumulative effects are graphed. As can be seen, the strong persistence of the AR1 process leads to a measureable cumulative effect. In the first year the ten decisions lead to only a .028% increase in the ration of imports to GDP. While the marginal impact of the decisions decreases over time, ten years later the cumulative effect is close to .15%. Considering the ratios of intra-EU trade to GDP are around ten to twenty percent typically, that is a significant impact for a single shock of ten decisions. For example, Germany frequently has twenty to forty pro-Commission decisions in a year, while the other countries often hit close to twenty cases as well. Several years of pr-Commission decisions, therefore, quickly add up to over a couple percentage points change in the ratio.

f. Reverse Causality?

One major concern is the potential for reverse causality. In particular, it is possible, as Stone Sweet and Brunell argue, that increases in intra-EU imports actually drives preliminary rulings. One interpretation is that these two variables therefore should be moving at the same time. This is in fact the way all previous studies have examined the relationship between trade and preliminary rulings, with contemporaneous variables. As can be seen in model 1, however, we find no evidence of this effect. The effect of pro-Commission rulings on intra-EU trade over GDP is a lagged one. This finding strongly suggests that ECJ decisions are affecting trade, not the other way around.

That said, there is good reason to believe that any affect of trade on ECJ rulings would not be contemporaneous. Stone Sweet and Brunell's argument is that the Court issues rulings, that these rulings thereby increase trade, and that this increase in trade then leads to more rulings. Each of these processes takes time. Once trade increases, litigants have to bring cases to court and the court has to ask for and get preliminary rulings. This is a multi-year process and so any effect of trade on preliminary rulings would also have to be lagged some number of years. Table 5 presents results from regressing pro-Commission preliminary rulings on two, three and four year lags of the ratio of intra-EU imports over GDP. As can be seen, we find no statistically significant relationships. Thus, not only do we control for the possibility of reverse causation in our analysis by looking for a lagged relationship while controlling for the contemporaneous relationship, but we find no evidence of the reversed lagged relationship either.

IV. Discussion

Courts, both national and international, are tasked with enforcing national and international law over state and national governments. Among the most important laws they are responsible for administering are trade laws. While a lot of work has been done that examines the ability of these courts to exert influence over government behavior, we have surprisingly little direct evidence over whether court rulings actually affect trade patterns. Most of the extant evidence suggests that there is no effect, and what evidence there is in support of such a relationship necessarily relies on a small data sample or suffers from problematic model specification.

In this paper we examine two mechanisms by which the ECJ can influence trade, infringement proceedings and preliminary rulings. The infringement proceedings are a close parallel to the types of cases that other international courts consider. Cases are brought against member state governments and they come directly to the ECJ. The only real difference is that infringement proceedings are almost always brought by the European Commission rather than by other national governments. Preliminary rulings, in contrast, are brought by private litigants to national courts. Thus, these cases look a lot more like national court decisions than international court decisions. Our results provide novel evidence as to the influence of judicial behavior on international trade. While we find no effect of infringement proceedings over intra-EU trade patterns, we do find a substantial effect of preliminary rulings. Thus, our results suggest that courts with the institutional legitimacy and resources of a national court can have a substantively significant influence on trade, but courts lacking those features cannot.

The test is quite rigorous. By including a full slate of country and year fixed effects, as well as a lag of the dependent variable, we are setting a high hurdle. This fact, in addition to carefully identifying a lagged relationship over the effect of pro-liberalizing rulings and isolating the effect on imports normalized by GDP, provides a highly demanding, and supportive, test of Stone Sweet and Brunell's argument. That said, it is only supportive of their claim that pro-liberalizing ECJ rulings increase trade, not that trade also leads to more pro-liberalizing ECJ rulings. We find no evidence of a contemporaneous or a lagged effect of trade on ECJ decisions.

Figure 1. A comparison of referrals, decisions and outcomes on preliminary rulings

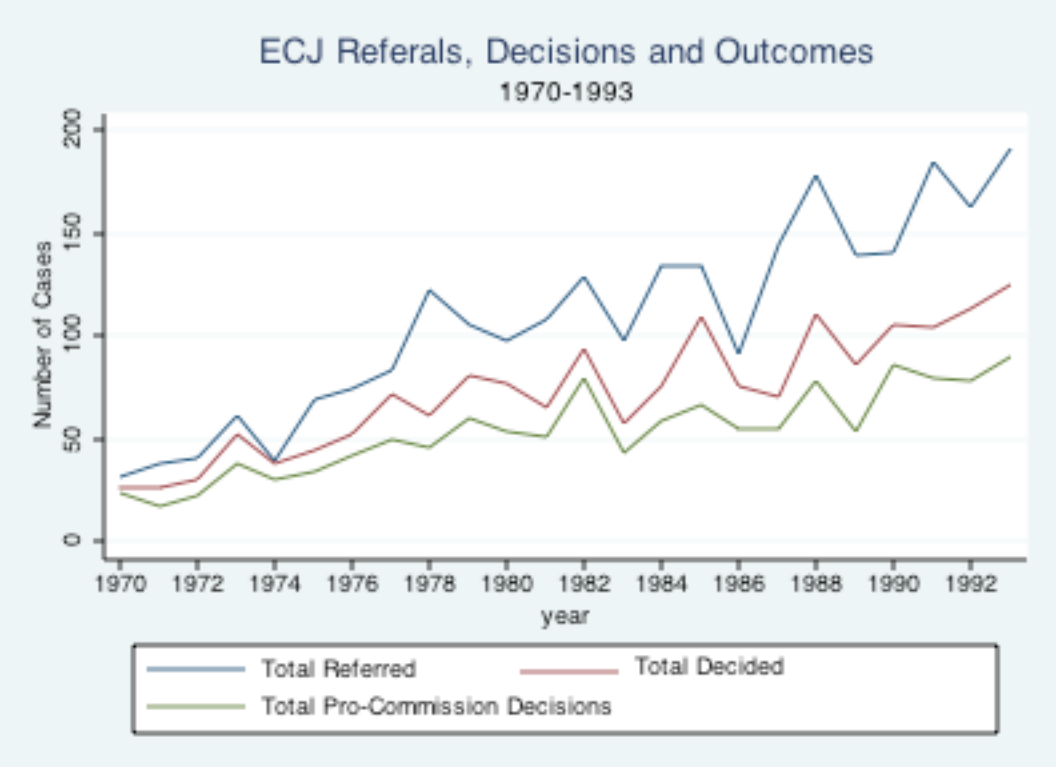

Figure 2: The ratio of intra-EU imports over GDP by country

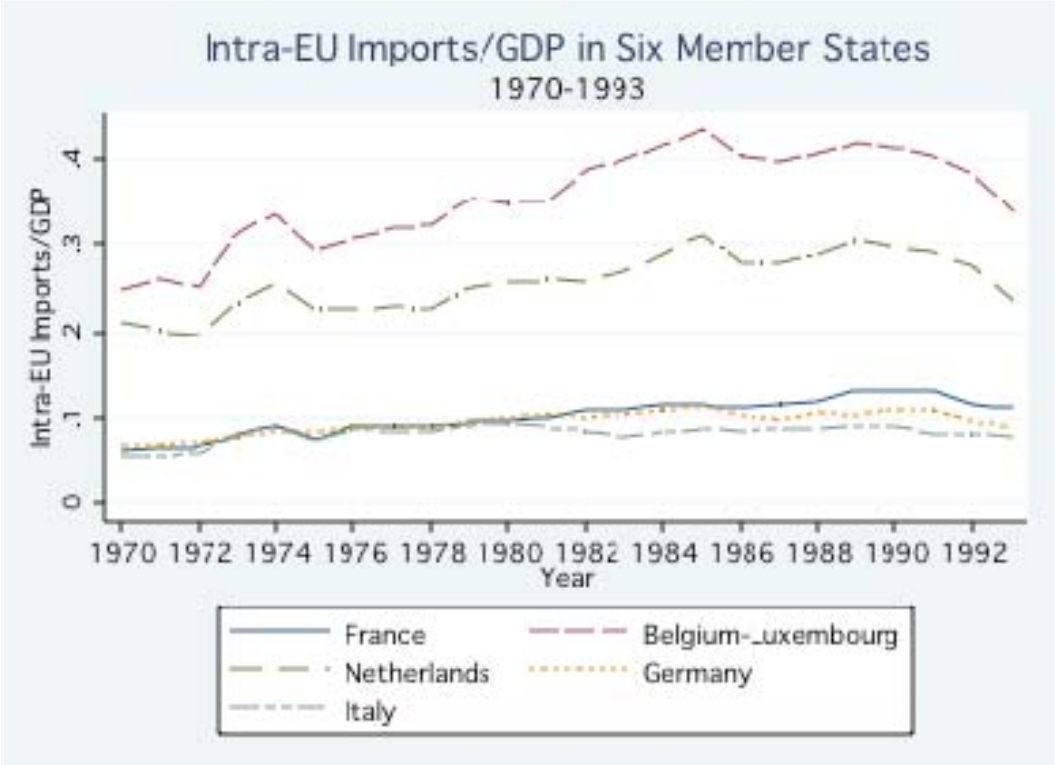

Figure 3. Trends in pro-Commission preliminary rulings by country

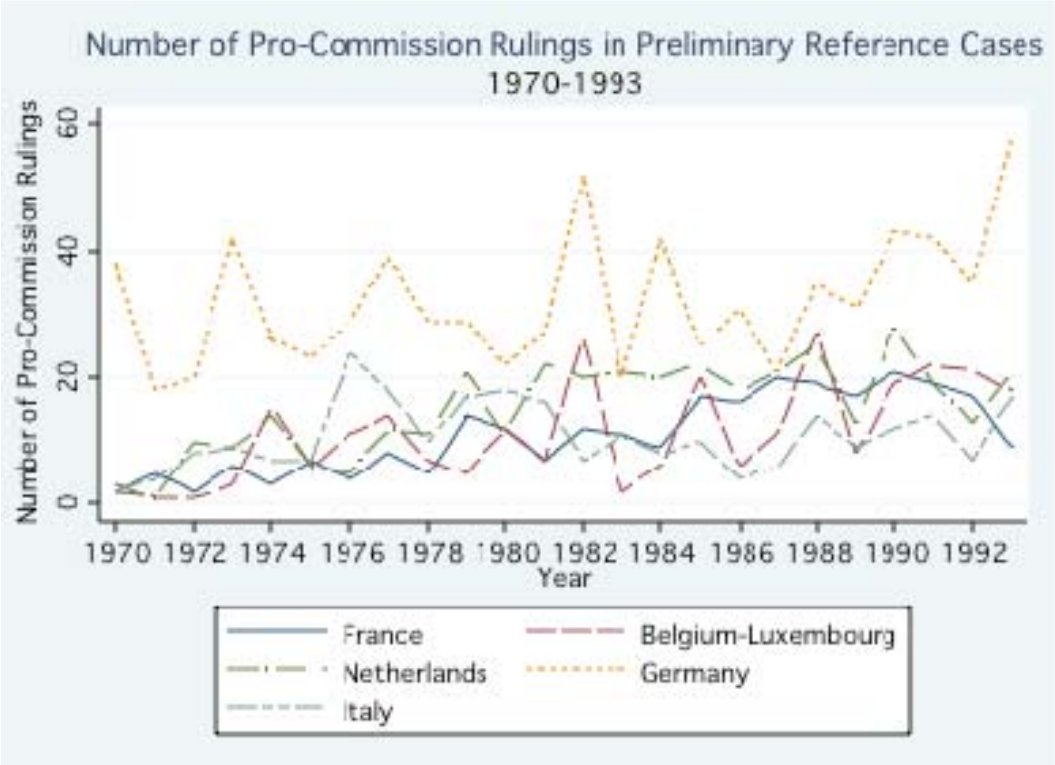

Figure 4. Trends in pro-Commission infringement proceedings by country

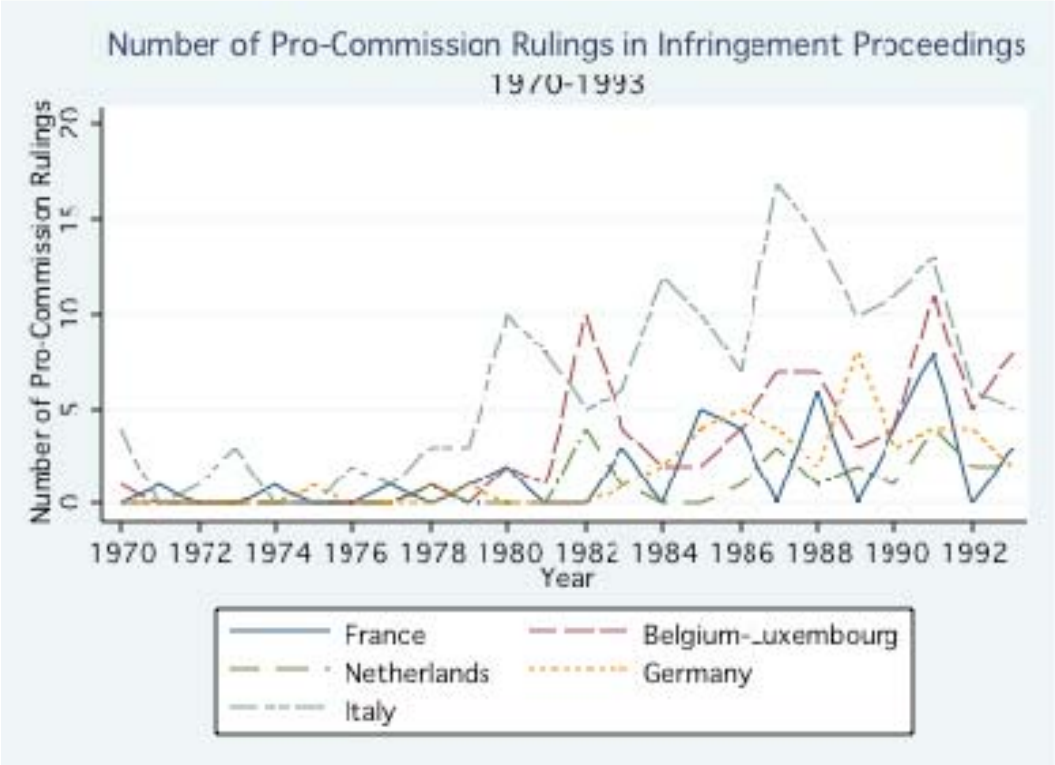
Number of Pro-Commission Rulings in Infringement Proceedings
1970-1993
Number of Pro-Commission Rulings
0
5
10
15
20
1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992
Year
France
Belgium-Luxembourg
Netherlands
Germany
Italy

Table 1: Descriptive Statistics, 1970-1993 (N=120)

	Mean	Standard Deviation	Min/Max
Intra-EU imports/GDP	17.77%	11.34%	5.62/43.31
Pro-Commission Infringement Rulings	2.71	3.58	0/17
Pro-Commission Preliminary Rulings	16.12	11.25	1/58

Table 2: Baseline OLS regression model of national intra-EU imports/GDP (panel-corrected standard errors)

Variable	Parameter Estimate
Intra-EU imports/GDP lag 1	0.83 (0.08)***
France	-2.62 (1.25)**
Germany	-2.82 (1.30)**
Belgium-Luxembourg	1.87 (0.78)**
Italy	-3.00 (1.39)**
1971	-0.37 (0.04)***
1972	-0.60 (0.05)***
1973	2.36 (0.033)***
1974	1.44 (0.25)***
1975	-1.81 (0.36)***
1976	0.91 (0.20)***
1977	0.28 (0.28)
1978	0.13 (0.30)
1979	1.69 (0.30)***
1980	0.47 (0.42)
1981	0.57 (0.43)
1982	1.13 (0.44)***
1983	0.90 (0.49)*
1984	1.66 (0.52)***
1985	1.80 (0.60)***
1986	-0.54 (0.68)
1987	0.54 (0.57)
1988	1.32 (0.55)**
1989	1.59 (0.60)**
1990	0.79 (0.67)
1991	0.35 (0.65)
1992	-0.52 (0.61)
1993	-1.30 (0.51)**
Constant	4.00 (1.61)**
R^2	.99
N	120
Joint Test for Fixed Effects (χ^2)	302.84***

*p<= .10 **p<=.05, *** p<=.01

comments: want to highlight the time dynamic, the importance of fixed effects (sig), and that they capture changes that we want them to capture (enlargement, norms, ems); we should multiply by 100.

Table 3: The Effect of Infringement Rulings on Intra-EU Imports/GDP (panel-corrected standard errors)

Variable	Paramater Estimate
Intra-EU imports/GDP (t-1)	0.817***
	(0.080)
Pro-Commission Infringement Rulings (t)	-0.075*
	(0.045)
Pro-Commission Infringement Rulings (t-1)	-0.003
	(0.045)
Pro-Commission Infringement Rulings (t-2)	0.007
	(0.043)
R^2	0.99
N	120

* p<=.10, ** p<=.05, *** p<=.01

comments: Fixed effects in all models; controls for change in GDP in regressions.

Table 4. The Effect of ECJ Preliminary Rulings on National Intra-EU Imports/GDP (panel-corrected standard errors)

	Model 1	Model 2	Model 3
Intra-EU imports/GDP (t-1)	0.819***	0.821***	0.808***
	(0.078)	(0.078)	(0.083)
Pro-Commission Preliminary Rulings (t)	0.006	-	-
	(0.013)		
Pro-Commission Preliminary Rulings (t-1)	-0.003	-	-
	(0.014)		
Pro-Commission Preliminary Rulings (t-2)	0.027*	0.028**	0.029*
	(0.015)	(0.015)	(0.015)
Pro-Commission Infringement Rulings (t-2)	-	-	0.003
			(0.043)
R^2	0.99	0.99	0.99
N	120	120	120

* p<=.10, ** p<=.05, *** p<=.01

Fixed effects in all models; controls for GDP in Prais Winsten regressions; control for chgconstgdp in LDV regressions; t-3 not sig, but similar results

xtpcse commecjagree oecdmgdp fr belux ge it y1993 y1992 y1991 y1990 y1989 y1988 y1987 y1986 y1985 y1984 y1983 y1982 y1981 y1980 y1979 y1978 y1977 y1976 y1975 y1974 y1973 y1972 y1971 y1969 y1968 y1967 y1966 y1965 y1964 y1963 y1962 y1961 y1960 if referring<7 & year<1994 & year>1969, pairwise

Figure 5. The marginal and cumulative effect of ten pro-Commission decisions on trade over time

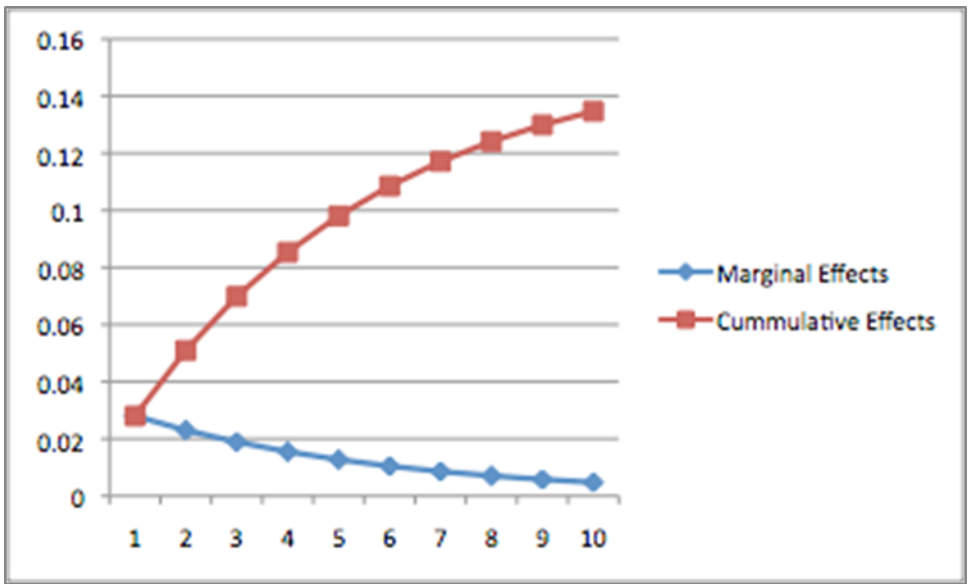

Table 5. The Effect of National Intra-EU Imports/GDP on Pro-Commission Preliminary Rulings (panel-corrected standard errors)

	Model 1	Model 2	Model 3
Intra-EU Imports/GDP (t-2)	41.86		
	(29.38)		
Intra-EU Imports/GDP (t-3)		37.27	
		(28.37)	
Intra-EU Imports/GDP (t-4)			25.03
			(28.79)
R^2	0.74	0.73	0.72
N	105	100	95

* p<=.10, ** p<=.05, *** p<=.01

Fixed effects in all models: chi-squared stat is p<.001 for inclusion of fixed effects. There is not apparent time trend to correct for, but if you are so inclined we run those models as well.

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