Mapping European law

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.Mapping European law

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ABSTRACT

This article constitutes the first systematic effort to promote a spatial and a subnational turn in the study of EU legal integration by demonstrating how geospatial methods and the selection of a subnational unit of analysis can improve our understanding of the use of the preliminary reference procedure. We conduct a theory-testing case study leveraging an original dataset of all references submitted by Italian courts from 1964 through 2013 and utilize geographic information systems (GIS) technology to analyze subnational patterns in reference activity. We use these data to evaluate whether several existing hypotheses explain recent subnational variation in reference rates. We uncover several illuminating findings. First, although population levels and domestic litigiousness best explain variation in reference rates, there is evidence that the domestic litigation effect is subnationally heterogeneous. Second, although use of the reference procedure has diffused since the 1960s, subnational reference rates are spatially clustered by issue area.

KEYWORDS Diffusion; European integration; European law; GIS; litigation; preliminary reference procedure

Introduction

The European Union (EU) is a community based on the rule of law. To the extent that the EU succeeds in governing its member states and private actors, it does so principally through a judicialized mode of governance that enlists private litigants and national courts to help pursue the EU’s policy objectives (Kelemen 2011). A rich scholarly literature tells us a great deal about the crucial role the European Court of Justice (ECJ) has played in promoting the process of European integration and about the politics surrounding the construction of the EU’s legal system. Indeed, pioneering studies by Stein (1981), Weiler (1991), Burley and Mattli (1993), Slaughter et al. (1998) and others have demonstrated the importance of the ECJ’s relationship with national courts, which refer cases to it via the preliminary

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reference procedure, recognize the supremacy of European law and apply European law and ECJ rulings domestically.

And yet, for all that we know about the importance of EU law to the process of integration and about variations in EU law litigation across member states and issue areas (Chalmers and Chaves 2012; Kelemen 2011; Stone Sweet 2004), we know very little about the actual subnational penetration of the EU’s judicial order. How has the geographic reach of EU law litigation evolved over time? Has it diffused steadily across the territory of member states or has it followed a path dependent pattern, remaining clustered in particular geographic locales? Existing research simply does not address these questions and thus can tell us little about the true spatial reach of the EU judicial order across the Union. This gap in our understanding is in large part a consequence of research design: quite simply, existing scholarship on the preliminary reference procedure has not examined variations at the subnational level, focusing instead on explaining variations across member states or policy areas.1

From the standpoint of research design, using the nation as the unit of analysis to study the preliminary reference procedure is problematic. As we will demonstrate, there is little theoretical reason to expect – or empirical evidence to suggest – that the relevant independent variables or the dependent variable (reference rates) are uniformly distributed within a state. Given subnational heterogeneity in reference activity, the existing literature’s focus on the nation as the unit of analysis can generate skewed results. As recent scholarship on ‘units of analysis’ emphasizes:

Comparativists too often rely on national-level means and aggregate data when studying countries with high degrees of internal heterogeneity. This tendency … has contributed to a miscoding of cases that can distort causal inferences and skew efforts at theory building. (Snyder 2001: 94)

This pernicious consequence of research design, well-known to geographers as the ‘modifiable areal unit problem’ (Gleditsch and Weidmann 2012: 476), amounts to the fact that ‘as the [geographic] unit of analysis varies, so too will our results’ (Soifer forthcoming). Hence, statistical analyses of reference rates will more precisely estimate the causal effects of location-specific independent variables when a subnational unit of analysis is selected. In short, because use of the reference procedure is a fundamentally bottom–up process that we expect to vary across regions within countries, it should – if possible – be studied with attention to local variation.

In this light, this article introduces a subnational and spatial turn in the study of EU litigation. We conduct a theory-testing case study of this approach, focusing on the subnational litigation of EU law in Italy. We use an original dataset of all preliminary references submitted by Italian courts from 1964 to 2013 and, for the first time, use geographic information
systems (GIS) technology to map the subnational, spatio-temporal patterns in preliminary reference activity. While empirically this analysis is limited to a single member state – Italy – and a single indicator of the reach of the EU judicial order – the geographic location of Italian courts submitting references to the ECJ – the implications for research design offer a transformative perspective on the study of EU law.

Firstly, this approach remedies the unit of analysis problem by assessing an inherently subnational phenomenon – the litigation of EU law – at the local level. Secondly, the subnational research design multiplies the number of observations and enables us to evaluate the robustness of existing studies of the reference procedure based on cross-national data. Our analysis of Italy suggests that a number of hypotheses derived from the existing literature fail to explain recent patterns of subnational variation in reference rates. Thirdly, by systematically considering the subnational reach of EU law, we can provide a far richer picture of the reach of EU governance ‘on the ground’ and offer a tentative explanation for patterns of subnational diffusion and clustering. In short, we suggest that use of the reference procedure will diffuse spatially as knowledge of EU law and networks engaged with EU law spread, and that issue-specific geographic clusters of EU law litigation will emerge. Finally, our approach highlights important avenues for further research and opens a broad new research agenda into the subnational penetration of the EU judicial order.

The remainder of the contribution is divided into three sections. The next section defends a subnational approach to the study of EU law, derives five empirically falsifiable hypotheses about the local use of the reference procedure from the existing EU law literature and two additional hypotheses from the literature on spatial diffusion. We then provide a series of empirical assessments of these hypotheses through an analysis of the litigation of EU law in Italy and uncovers several illuminating findings. In conclusion, we summarize our findings and suggest an agenda for future research.

The subnational litigation of EU law: testable hypotheses

EU governance relies heavily on the decentralized enforcement of EU law by private litigants before national courts (Kelemen 2011). Thus, EU governance occurs not only in the corridors of power in Strasbourg, Brussels, Luxembourg, or in member state capitals, but in courtrooms in towns and cities across Europe where European citizens invoke their EU rights. Indeed, because historically many courts of last instance in EU member states were hesitant to submit themselves to the ECJ’s authority (Alter 2001; Davies 2012; Weiler 1994), the litigation of EU law and engagement with the ECJ through the preliminary reference procedure occurred more often within lower courts,
and for this reason the origin of preliminary references offers a location-specific indicator of where EU law is most practiced.

An important body of scholarship has explored cross-national variation in demand for EU law litigation (see, for instance, Alter 2000; Bobek 2008; Burley and Mattli 1993; Carrubba and Murrah 2005; Dyevre 2013; Vink et al. 2009; Weiler 1991, 1994)–typically measured by comparing the frequency of references for preliminary rulings to the ECJ across member states. However, this literature has never explored subnational variation in patterns of references across regions within member states. Given the advantages of analysis at the subnational level described above, we identify five leading hypotheses in the existing literature on EU law whose robustness can be assessed by gauging their ability to explain subnational variation in preliminary reference rates. In addition, we explore two hypotheses that emerge from the literature on policy diffusion. We first identify each hypothesis before turning–in the next section–to their empirical assessment.

**Trade**

In their pioneering study, Stone Sweet and Brunell (1998: 75) posited that increased national levels of transnational economic exchange boost demand for ECJ dispute resolution, activating a ‘virtuous’ cycle of ever-greater use of the reference procedure. The positive correlation between the magnitude of a country’s exports and its reference rates was later corroborated by Fligstein and Stone Sweet (2002), Tridimas and Tridimas (2004), and Carrubba and Murrah (2005). Importantly, the functional logic behind the argument should extend to the subnational level: if states that trade more generate more references to the ECJ, then regions within states that trade more should also generate more references. This leads to our first hypothesis:

H1: The greater the share of trade in a region’s economy, the higher the rate of references to the ECJ originating from courts in that region.

**Population and domestic litigiousness**

In a recent paper, Vink et al. (2009) posit that the strong correlation between trade levels and reference rates uncovered by Stone Sweet and Brunell (1998) suffers from omitted variable bias. Specifically, the authors:

suggest two more intuitive factors: population size and litigation rates. First, bigger member states will make more references than small member states simply because there are more court cases as such and also more courts and judges that can refer questions. Second, some states are more litigious than others, due to legal culture, the availability of systems of alternative dispute resolution, or legal aid. (Vink et al. 2009: 13)
The observable implication of this argument is that any significant correlation between trade levels and reference rates will disappear when controlling for population size and domestic litigation rates. Vink et al.’s (2009) country-level analysis supports this conclusion and finds that population size and litigation rates exhibit a significant effect on use of the reference procedure. On the other hand, Wind et al.’s (2009) quantitative study uncovered a negligible impact of population size on reference rates, and Golub (1996: 368–75) highlights that several qualitative studies have ‘found that differences in societal litigiousness and internal national judicial structure were either minimal or inconsequential’ in explaining reference rates. In this light, a more fine-grained, subnational analysis may allow us to assess the validity of Vink et al.’s (2009) claims, leading to the following two hypotheses:

H2: The more populous a region, the higher the rate of references to the ECJ originating from courts in that region.
H3: The greater the overall rate of litigation within a region, the higher the rate of references to the ECJ originating from courts in that region.

Social capital and civic engagement

Cichowski (2007)’s analysis of domestic actors’ use of the reference argues that the litigation of EU law is contingent upon the plaintiffs’ ability to garner the necessary civil society support. More specifically, civic associations can foster interpersonal bonds of trust and provide the organizational infrastructure and legal expertise to enable prospective litigants to activate the reference procedure. Underlying these arguments is a longstanding claim, popularized by Putnam (1994), that patterns of civic engagement and associational life bolster the effectiveness and use of democratic institutions. Importantly, Putnam’s study revealed substantial subnational variation in social capital levels across Italy, which offers us an excellent opportunity to assess whether civic engagement may explain inter-regional variation in reference rates. This leads to our fourth hypothesis:

H4: The greater the levels of civic engagement within a region, the higher the rate of references to the ECJ originating from courts in that region.

Material resources

The resource mobilization approach to the study of social movements emphasizes that the procurement of material resources is a necessary condition for social movement formation (McCarthy and Zald 1977). Drawing on this approach, Epp’s (1998) comparative study of social activists’ ability to leverage law to promote progressive social change emphasizes the degree to which prospective plaintiffs are dependent on the existence of a ‘litigation support structure’. While this argument overlaps with theories prioritizing social capital as captured by H4, its underlying logic is more purely economic:
ceteris paribus, wealthier individuals and resource rich ‘repeat players’ (Galanter 1974: 97) should be better able to invoke EU legal provisions in court. Tri-dimas and Tridimas (2004: 133) make similar claims: ‘private litigants who have access to the required financial resources … will be privileged’ in using the procedure (see also Conant 2002). We believe that gross domestic product (GDP) per capita can serve as a plausible proxy measure of the ‘resource stock’ available to prospective EU litigants, and this provides the basis for our fifth hypothesis:

H5: The greater the levels of GDP per capita within a region, the higher the rate of references to the ECJ originating from courts in that region.

**Diffusion and spatial clustering**

The burgeoning scholarship on the diffusion of judicial practices and public policy has important implications for the study of EU legal integration. Broadly speaking, this literature identifies two main classes of diffusion mechanisms: (1) learning; and (2) adaptation to a more competitive environment (Elkins and Simmons 2005). Amongst public law scholars, these mechanisms have been discussed most extensively in the American literature, which emphasizes in particular the importance of learning mechanisms – finding that inter-court proximity, greater judicial professionalism/prestige, the presence of shared issue-specific knowledge, integrated legal reporting mechanisms, and common cultural linkages facilitate the diffusion of legal precedent and litigation via various forms of learning and emulation (Caldeira 1985; Linos 2006). In the EU law context, scholars have emphasized that an identifiable set of actors (including large law firms, ‘Euro-lawyers’, academics, judges, non-governmental organizations (NGOs) and other private litigants) together constitute a ‘European legal field’ that has actively promoted the development of the EU legal order, including the spread of EU law litigation (Vauchez and de Witte 2013). Combining insights from these literatures, we draw two related inferences. First, we anticipate that use of the reference procedure will diffuse across the territory of a member state over time as knowledge of EU law and the European legal field spread spatially. Second, because proximity facilitates the diffusion of knowledge and judicial practices, we expect the emergence of particular clusters or ‘hotspots’ of EU law litigation focusing on specific legal issues, particularly those relevant to local socioeconomic context. Thus, the observable implications of the diffusion literature lead us to two final hypotheses:

H6: The use of the preliminary reference procedure will diffuse across the territory of a member state over time.

H7: The use of the preliminary reference procedure will exhibit issue-specific spatial clustering subnationally.
The subnational drivers of preliminary references in Italy

Having identified seven hypotheses that might explain subnational variation in reference activity, in this section we empirically demonstrate the value of a subnational research design via a case study of EU litigation within Italy across time and space. There are two reasons why Italy is advantageous from the standpoint of case selection. First, Italian courts have been particularly active referrers of cases to the ECJ: between 1964 and 2013, 1,225 preliminary references originated from Italy, including many of the landmark cases in the history of EU law (only German courts have submitted more references). Obviously, if the dependent variable of interest – preliminary references – takes on a very small value when aggregated nationally, then it will suffer from even greater zero-inflation and overdispersion when it is disaggregated subnationally, limiting the reliability of statistical analyses. Thus, the active use of the reference procedure by Italian courts mitigates overdispersion and renders it manageable. Second, Italy is a state with a high amount of subnational social, economic, demographic, and institutional heterogeneity. This not only promises to maximize variation in both the dependent and independent variables to facilitate causal inference, but it will help us assess the degree to which the ‘modifiable areal unit problem’ has contaminated cross-national analyses of EU litigation in which Italy features prominently.

We proceed by focusing on multiple sources of subnational variation within Italy. First, after mapping Italian preliminary references using GIS to visualize the territorial diffusion and subnational patterns of EU litigation, we select (and justify) the Italian region (n = 20) as our subnational unit of analysis and statistically assess inter-regional variation in reference rates. Ultimately, by selecting the region over the state as our unit of analysis, we multiply the number of observations and increase statistical power (Snyder 2001). Yet, to contextualize, interpret, and extend our statistical analysis, we leverage three additional sources of variation. First, we highlight the well-known subnational socioeconomic divide between northern and southern Italian regions (Banca D'Italia 2009, 2010; Putnam 1994). Theoretically, this permits assessing whether the relationships between a series of explanatory variables and reference activity between northern regions are different compared to the same relationships between southern regions.4 Second, we leverage variation in reference activity between the capital city of Rome and other areas of Italy. Rome is home to five of Italy’s six supreme courts; hence, we have strong Bayesian priors suggesting that the Roman dynamics of EU law litigation are sui generis. Finally, we conclude by exploring the degree to which the litigation of EU law tends to be spatially clustered subnationally by leveraging a leading tool of local spatial autocorrelation: the Getis–Ord Gi*.
Mapping EU law: the spatio-temporal structure of EU litigation in Italy

In the only empirical study to date regarding the use of the reference procedure in Italy, Reale and Borracetti (2008: 3; our translation) highlight that while references comprise a ‘very considerable percentage’ of the ECJ’s caseload, at the subnational level references ‘comprise a very minimal fraction [of litigation] compared to the flow of [domestic] lawsuits registered annually’. Ferrari (2011: 100) adds that, ‘knowledge of EU law in Italy, on behalf of judges as well as lawyers, is contingent in practice and is distributed like a leopard’s skin’. In other words, while the overall number of cases referred from Italy to the ECJ has increased over the past five decades, we should not assume that increase reflects a subnationally uniform and monotonic shift. To visualize the actual pattern of spatial diffusion, we construct an original dataset of all references submitted to the ECJ by Italian courts from the first such reference in 1964 to December 2013 (n = 1,225). The references are geocoded based on the city location of the referring court to enable mapping using GIS. Figure 1 displays the revealing spatial structure of EU litigation over six decades: using graduated symbols, we map the total number of references by decade based on their city of origin—the larger the circle, the more references originated from that city within a given decade.5

What is the general story told by Figure 1? In the 1960s, only a few courts across northern Italian regions and the capital city of Rome submitted references. In the 1970s, a steady increase in the number and territorial diffusion of references across northern cities occurred, and the frequency of referrals in Rome increased substantially. This pattern became entrenched in the 1980s and the 1990s, with the majority of references originating from the cities of Venice, Milan, Genova, and Rome. However, in the 1990s we can discern the ‘awakening’ of southern courts, as the number of references as well as their territorial coverage across southern cities (collectively referred to as the Mezzogiorno) increased sharply. To operationalize and systematically measure the increased territorial diffusion of EU law litigation, we use a GIS buffer tool to gauge the percentage of Italy’s territory that falls within a set distance of a court that participates in the preliminary reference procedure. Figure 2 summarizes increases over time in the percentage of territory falling within a 25 or 50 kilometer buffer centered around the location of a referring court—or roughly within a short or medium commuting distance of a referring court (maps for the 50 km buffer are provided as Appendix A in the Online Appendix). There has been a steady increase in the percentage of territory within both buffer distances of a referring court. For the 50 kilometer buffer, the percentage has risen from 18.6 per cent in 1964–1973 to 71.7 per cent in 2004–2013. For the 25 kilometer buffer, the percentage has
Figure 1. The spatial distribution of preliminary references, 1964–2013.
risen from 5.4 per cent in 1964–1973 to 32.8 per cent in 2004–2013. This territorial diffusion began across northern and central Italy and has since encompassed much of the Mezzogiorno over the past two decades. In short, whereas during the 1960s and 1970s only one-sixth of Italy’s territory lay within (a 50 kilometer) commuting distance of a court that had submitted a reference to the ECJ, over the past decade nearly three-quarters of Italy’s territory did. Hence, not only is the frequency of EU law litigation on the rise, so too is its territorial diffusion.

Before turning to our statistical analyses in the next section, a visual inspection of Figure 1 and review of these descriptive statistics provide us with an opportunity to evaluate the face validity of a number of our hypotheses. First, the fact that northern courts were the first and most frequent referrers of cases to the ECJ is congruent with the trade (H1) and social capital (H4) hypotheses: northern regions have been historically integrated within networks of inter-European trade and the home of industrial districts boasting substantial civic associationalism (Felice and Vecchi 2012: 25). In such an economically prosperous space, the litigation of EU law is also more likely to be supported by resource-rich ‘repeat players’, which aligns with the material resources hypothesis (H5). For example, Genova’s relatively high levels of litigation of EU law ‘is easily explained by the fact that litigation was initiated by the same law firm’ (Ferrari 2011: 100).

Figure 2. Percentage of territory within 25 km and 50 km of a referring court, 1964–2013.
However, none of the hypotheses deriving from the existing literature can explain the observed pattern of diffusion of references across Italy over time. Consider the fact that southern Italian courts have recently become as active in referring cases to the ECJ as northern Italian courts. References from the South did not ‘catch up’ with those from the North because the level of social capital in the South increased relative to that in the North (as H4 would demand): the Bank of Italy concludes that throughout the 20th century social capital remained concentrated across the North (Banca D’Italia 2010: 19–20). Nor did southern references catch up because of economic gains associated with trade (H1) or material resources (H5): economically, longitudinal studies conclude that the North–South divide has remained an enduring feature of the Italian landscape (Banca D’Italia 2009: 7; Felice and Vecchi 2012: 22, 26). Nor do relative shifts in population (H2) explain the change: data from the Italian Statistical Service (ISTAT) demonstrate that although northern and central Italian regions have seen population growth in the past 15 years, the southern population has remained stagnant, which would lead us to expect relative gains in references from the North, not the South (ISTAT 2015a). Furthermore, shifts in domestic litigiousness (H3) cannot explain southern catch-up: numerous studies highlight the high degree of litigiousness of southern Italian society in the post-war years – when few references to the ECJ were being made (Carmignani and Giacomelli 2009; Ferrari 2011), and over the past two decades when the rate of southern references to the ECJ was increasing, ISTAT statistics show that rates of domestic litigation in the South – as proxied by litigation rates before southern administrative courts – have actually decreased slightly (ISTAT 2000–2010; ISTAT 2015b).

The diffusion of information (H6), the hypothesis derived from the literature on policy diffusion, offers a more likely explanation for the equalization of reference rates in the South and north. The late 1980s witnessed the implementation of the EU’s regional policy aimed at reducing regional socio-economic disparities via the distribution of structural funds. A partnership between the European Commission, the Italian central government, and southern regional governments was institutionalized, and between 1996 and 2000 a Mezzogiorno development plan was drafted to, *inter alia*, bolster ‘networks and communications’ across southern regions, leading to a ‘paradigm shift’ in southern regional policy-making (Bull and Baudner 2004: 1061). Southern regional governments were, for the first time, delegated substantial fiscal responsibility for the plan, and the Commission required the institutionalized inclusion of ‘social actors’ in the planning process (ibid.: 1062; Tedesco 2006). This process of ‘Europeanization’ ‘diffused the norms and instruments’ of the Mezzogiorno development plan to local policymakers and civil society actors (Bull and Baudner 2004: 1069; Tedesco 2006: 90). As these hybrid institutions were forged, it is likely that a substantial
share of southern legal professionals became aware of EU legal provisions for the first time. Although this evidence does not directly assess the validity of H6, it does provide support for the information diffusion argument and highlights our claim that legal integration literature needs to pay greater attention to spatial diffusion mechanisms. While a full explanation for the increase in southern references during the 1990s would require detailed empirical work beyond the scope of this study, Pavone (2015) uncovers qualitative evidence that the spread of reference activity in southern Italy likely reflects the diffusion of knowledge of EU law, driven in particular by expanded opportunities to obtain EU legal training. Furthermore, despite the fact that the EU had introduced new structural funds policies that were of greater substantive relevance in the South may help explain the increase in EU law references, the mere existence of relevant substantive law, in the absence of information diffusion, did not generate references in earlier periods. For instance, despite the great importance of EU agricultural policy in the South from the 1960s, southern courts did not refer cases on this issue to the ECJ in the early decades.

The correlates of the subnational litigation of EU law

Our dataset of Italian references enables us to move beyond descriptive statistics and use regression analysis to probe whether the correlations between references and various economic, demographic, and sociolegal indicators highlighted by the existing literature also hold subnationally. To undertake this task, we gathered data to assess arguments positing a positive impact on EU litigation of intra-European trade (H1), population size (H2), domestic litigation rates (H3), social capital and civic engagement (H4), and the material resources to support litigation (H5). For intra-European trade we used the region’s export share – the percentage of national exports from a given region in a given year. We measure population size as the region’s logged population. Domestic litigation rates were proxied by the yearly number of cases lodged before a region’s administrative court of first instance. Social capital and civic engagement was proxied by the number of survey respondents in a given region in a given year who participated in a cultural, recreational, or other civic activity in the previous 12 months. Finally, the presence of material resources to support litigation was proxied by logged GDP per capita, based on our assumption that resource stocks to support litigation will be higher in wealthier regions.

Spatially, measures for the foregoing variables were obtained from ISTAT at the regional level, as they were not consistently available for a smaller unit of territorial organization. Nevertheless, there are also theoretical reasons to select the region as the unit of analysis: administrative courts (Tribunali Amministrativi Regionali, or TARs) are organized at the regional level, and ‘the twenty-seven [civil] appeal court distretti are by and large coterminous with
the regions of Italy’ (Watkin 1997: 96–8). Temporally, data were only consistently available for the post-1997 period, which precludes us from exploring diachronic variation in EU litigation rates from 1964 through 1997 to corroborate our assessments in the previous section. In other words, this analysis is well suited to explaining recent cross-sectional variation in reference rates across regions, but not macro-temporal trends. Indeed, all the following econometric results remain substantively unchanged when including year fixed effects to control for temporal trends in the data (see Appendix B in the Online Appendix). To analyze these data, we leverage a negative binomial regression model – a standard technique for the analysis of overdispersed count data.

We ran four different negative binomial models regressing the yearly number of regional preliminary references (Yearly PRs) on the independent variables listed above. The first model comprises data for all of Italy. However, as argued previously we have strong Bayesian priors that the dynamics spurring litigation in Rome are likely to be *sui generis* and that the relationships between the explanatory variables and reference rates may be different between southern regions than between northern regions. We thus run three additional models: Model 2 omits observations from Lazio where Rome is located, whereas Models 3 and 4 replicate the analysis on subsetted datasets restricting observations to just northern regions (Model 3) and southern regions (Model 4). The results are captured in Table 1.

Table 1 showcases some surprising results. First, contrary to H1, a region’s export share is not a positive predictor of the yearly number of region-level references, controlling for other covariates. In fact, between northern

<table>
<thead>
<tr>
<th>Variable</th>
<th>1: Italy</th>
<th>2: Italy (w/o Lazio)</th>
<th>3: North Italy</th>
<th>4: South Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export Share</td>
<td>-0.035**</td>
<td>-0.008</td>
<td>-0.058</td>
<td>0.265</td>
</tr>
<tr>
<td>ln(Population)</td>
<td>0.982****</td>
<td>1.067****</td>
<td>0.576****</td>
<td>1.799****</td>
</tr>
<tr>
<td>Domestic Litigation</td>
<td>0.080****</td>
<td>-0.0254</td>
<td>0.478**</td>
<td>-0.079</td>
</tr>
<tr>
<td>Civic Participation</td>
<td>0.038</td>
<td>0.0609</td>
<td>0.0530*</td>
<td>0.164</td>
</tr>
<tr>
<td>ln(GDP/capita)</td>
<td>1.941****</td>
<td>0.576</td>
<td>-1.889*</td>
<td>1.508</td>
</tr>
<tr>
<td>(Intercept)</td>
<td>-27.24****</td>
<td>-14.31**</td>
<td>14.33</td>
<td>-30.38****</td>
</tr>
<tr>
<td>N</td>
<td>272</td>
<td>258</td>
<td>108</td>
<td>112</td>
</tr>
</tbody>
</table>

Notes: The dependent variable is the number of yearly references at the regional level. The analysis leveraged heteroskedasticity-robust standard errors for all models. Measures for covariates were obtained from ISTAT and are detailed in Note 11. Including year fixed-effects does not substantially change the results (see Online Appendix B).
regions (Model 3) there is a negative correlation between export activity and EU litigation, although it falls short of statistical significance. We ran the same analysis limiting the dependent variable to references that we would expect to be most closely associated with export levels, specifically those related to EU competition, taxation, free movement of goods and services, and freedom of establishment, and the results remain unchanged (these results are included as Appendix C in the Online Appendix). To be sure, we should not conclude that trade-prone regions are not more likely to litigate certain EU legal provisions, but perhaps it is not export activity per se that is driving recent variation in reference rates between Italian regions.

Secondly, and consistent with H2, population appears to be the most robust and significant predictor of inter-regional variation in EU law litigation since 1997, suggesting that population levels may be causing inter-regional variation in reference rates in recent years. Across all model specifications, the logged population covariate is positively and significantly correlated with the yearly number of region-level references ($p < 0.001$). Thirdly, levels of social capital, proxied by civic participation rates, are not a significant predictor of references across all model specifications, providing little support for the expectations of H4.

The most interesting findings, however, concern the relationship between domestic litigation before regional administrative courts and reference activity (as posited by H3), for they showcase how the exceptionalism of EU litigation in Rome, as well as the differences between northern and southern regions, can affect our causal inferences. Whereas in Model 1 domestic litigation is a significant predictor of reference activity, the exclusion of Lazio in Model 2 (and the resulting insignificance of the domestic litigation coefficient) demonstrates that this effect is being driven almost entirely by Rome, where approximately 38 per cent of all Italian references originate. Recall that Rome is home to five of Italy’s six supreme courts, two of which – the Court of Cassation (Italy’s supreme civil court) and the Council of State (Italy’s supreme administrative court) – have submitted 18 per cent of all Italian references since 1964 (over 100 references each). Importantly, the ECJ proclaimed in the CILFIT case\(^7\) that courts of final appeal have an obligation to refer cases implicating EU law to the ECJ unless a clear precedent can be easily applied, in contradistinction with lower courts, which maintain the discretion to refer. In keeping with this legal obligation, one would expect Roman courts of final appeal should refer a higher percentage of the cases they hear to the ECJ than lower courts.\(^8\) Finally, Roman exceptionalism also appears to be behind the significant relationship between GDP per capita and reference rates in Model 1: when the relatively prosperous region of Lazio is excluded from the analysis in Models 2–4, GDP per capita ceases to be a significant predictor of reference activity.
Yet, Models 3 and 4 showcase that it is not just variation between Lazio and the other Italian regions that matters – it is also the divide between northern and southern regions. Specifically, Model 3 reveals a positive and statistically significant \((p < 0.05)\) relationship between domestic litigation levels and reference rates between northern regions. Yet, Model 4 highlights that this relationship fails to hold across southern regions, where we find a negative, albeit insignificant, relationship between the two variables. While a full explanation of this result is outside the scope of this contribution, we suspect it captures a difference in the type of litigants. As Pavone (2015) demonstrates, EU law is more likely to be litigated across northern regions by large law firms, whereas across southern regions it is mostly solo-practicing lawyers who bear the burden of vindicating EU law in court. The specialized knowledge possessed by northern law firms may facilitate uncovering EU-law-related questions in a domestic lawsuit in a way that cannot be replicated by southern solo practitioners, hence the positive association between domestic and EU law litigation across the North and its absence across the South (see Kelemen [2011] on the role of large law firms as transmission belts of EU law). More broadly, these results underscore that country-level relationships cannot be assumed to hold locally and may mask divergent subnational patterns of reference activity.

**Issue-specific clustering of EU litigation**

Finally, to assess the hypothesis that reference activity in specific issue areas of EU legal practice is spatially clustered (H7), we leverage GIS to uncover the spatial structure of the use of the reference procedure to litigate specific issue areas partially or fully harmonized under EU law. Figure 3 displays spatial autocorrelation analysis of preliminary references from 1964 to 2013 related to the free movement of goods and services, taxation, and social provisions (a parallel analysis for all Italian references is provided in the Online Appendix as Appendix E). Specifically, Figure 3 aggregates city-level point data capturing the number of issue-specific references (displayed as graduated circular symbols) into a standardized 25 × 25 polygon grid to enable utilizing a leading tool for uncovering local spatial clustering: the Getis–Ord Gi\(^*\) (Getis and Ord 1992). The Gi\(^*\) statistic identifies whether statistically significant high or low polygon values for a particular variable (compared to the global mean) are clustered spatially within a given fixed distance band surrounding each polygon, thus revealing statistically significant ‘hot spots’ and ‘cool spots’.

As Figure 3 showcases, the location of EU law litigation hotspots varies by EU issue area. The Genova metropolitan area emerges as a statistically significant hotspot of EU free movement law litigation, even when Rome is included in the analysis. Results excluding Rome are unchanged, but the Milan metro
Figure 3. Hotspot analysis of free movement of goods and services references (left), taxation references (center), and social provisions references (right), 1964–2013.

Source: Basemap: GISCO – Eurostat (2013) (European Commission); Administrative Boundaries: EuroGeographics; grid is comprised of 25 vertical lines and 25 horizontal lines; projected coordinate system is ETRS 1989 UTM Zone 33N.
area and regions near the port city of Venice also emerge as significant hotspots of free movement of goods provisions – see Appendix G in the online appendix. This is unsurprising, given that all three cities – and in particular Genova, which is home to Italy’s largest port – are hubs of substantial transnational trade activity. The focus of EU taxation law litigation is shifted slightly to the north-east, particularly from Milan through Brescia and Trento. Pavone (2015) suggests that EU taxation provisions may be litigated with particular vigor along this corridor given the presence of the Brescian steel-working industry near Milan and of Austrian foreign-owned subsidiaries in Trentino-Alto Adige, which have an incentive to invoke EU tax provisions to avoid double-taxation. Finally, a third distinct spatial geography characterizes EU social provision litigation. Consider, for example, how Naples, whose economic troubles and lackluster delivery of social services (most notably garbage collection) are well-known, emerges as a statistically significant hotspot of EU social provision references.

It is not our objective to provide a fine-level accounting for every hotspot revealed in Figure 3. Rather, we seek to provide a couple of suggestive interpretations for the Getis–Ord GI* results, and to underscore how they reveal that the litigation of EU law exhibits distinct spatial geographies depending on the issue-area under analysis. This result likely reflects some combination of the functional responsiveness of EU law to local socio-economic context and, in line with H7, the idea that the diffusion of knowledge of EU law is likely to be issue-specific. For example, the diffusion of EU free movement law litigation is facilitated within a cluster of spatially proximate cities with substantial transnational trade activity, for these localities are already likely to boast a class of legal professionals specialized in litigating related provisions of domestic or transnational law. In short, these results showcase the presence of significant subnational spatial clustering in EU litigation activity, along with the benefits of disaggregating EU law into its constitutive components.

Conclusions

In this contribution, we have taken a first step toward mapping EU law and uncovering the spatio-temporal structure of its judicial practice. We have demonstrated that attention to the subnational dimension of EU law and governance can yield significant theoretical insights and challenge a number of claims made in the existing literature. Most surprisingly, we have uncovered suggestive evidence that that the association between domestic litigation rates and the litigation of EU law varies across regions, that the subnational diffusion of reference activity cannot be explained by changes in population, economic resources, trade or social capital, that the territorial diffusion of EU law litigation may reflect the spread of knowledge of EU law, and that
subnational reference activity tends to be spatially clustered by issue area. Furthermore, we have demonstrated the utility of using GIS technology to analyze the subnational spatial geography of EU law litigation. While our findings remain tentative, this line of analysis provides a much more vivid and detailed picture than existing approaches of how the domestic reach of the EU’s legal system has developed over space and time.

Although our empirical analysis is limited to the study of one legal mechanism (the preliminary reference procedure) in one member state (Italy), this study opens the path to broad new avenues of research on EU legal integration. Subnational analyses force us to think deeply about what the appropriate unit of analysis should be, to probe the location-specific causal mechanisms underlying aggregate litigation statistics, and to consider the myriad ways that the practice of EU law can be entrenched locally. Indeed, the use of geocoded data for subnational analysis could be leveraged to illuminate other manifestations of the spread of EU law, such as the proliferation of law offices specializing in EU law, law faculties offering degree courses in EU law, or national courts citing the ECJ’s case law or EU secondary legislation. Ultimately, we contend that analyzing the hitherto unexplored subnational spatio-temporal dimensions of EU legal integration enables us to take an unprecedented analytic leap towards systematically explicating where and why EU legal provisions are invoked on the ground.

Notes

1. As discussed in this paper, some studies have examined variations in rates of references between national high courts and lower courts, but these studies have not considered variations in rates of references across regions within countries.

2. Diffusion can be induced by a hegemonic power via coercion. However, given the lack of a supranational coercive apparatus in the EU, this diffusion mechanism is not as relevant to the EU context.

3. Evidence of competition-induced legal development has been somewhat scarcer. See Moser and Trubek (2006: 1471) and Shipan and Volden (2008) for explanations of diffusion based on competitive pressures.

4. Following ISTAT conventions, we group Piemonte, Lombardia, Trentino-Alto Adige, Emilia-Romagna, Friuli-Venezia Giulia, Liguria, Valle d’Aosta, and Veneto as northern regions, and Abruzzo, Basilicata, Calabria, Campania, Molise, Puglia, Sardegna, and Sicilia as southern regions.

5. In the next section, we transition to using regions as our unit of analysis and defend this choice.

6. Note that this measure is designed to capture not specific support structures that would facilitate litigation but rather broader patterns of civic engagement and associational life that characterize a region.

7. This is the so-called Acte Clair doctrine. See Case 283/81, Srl CILFIT and Lanificio di Gavardo SpA v. Ministry of Health, [1982], ECR 3417. In the recent Traghetti del Mediterraneo decision, the ECJ further elaborated that the state can be held
liable if a supreme court fails to refer a case to the ECJ in manifest violation of EU law. See Case C-173/03, *Traghetti del Mediterraneo* [2006] ECR I-5177.

8. This claim would seem to challenge the ‘judicial empowerment thesis’ – a strand of scholarship positing that lower courts have great incentives to refer cases to the ECJ in order to acquire judicial review powers, whereas high courts who view the ECJ as a more direct threat to their authority are more reluctant to refer (Alter 1996, 2001; Weiler 1991, 1994). While such ‘judicial empowerment’ was likely a powerful dynamic driving references in the early periods of EU legal integration, the high levels of references coming from Italian supreme courts in recent years contradicts expectations of the judicial empowerment thesis and suggests that Italian high courts may be regaining control of the reference procedure.

9. For a figure facilitating the interpretation of this statistical result see Appendix D in the Online Appendix.

10. This analysis is unchanged if we use a 50 × 50 polygon grid instead; these results are included in the Online Appendix as Appendix F.

11. For information regarding how the Gi* statistic was run and why it is desirable to aggregate point data into polygons, refer to Appendix H in the Online Appendix.

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**Disclosure statement**

No potential conflict of interest was reported by the author.

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