

The Political Geography of European Legal Integration

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Abstract

How are processes of political development shaped by pre-existing institutional structures? This paper explores how the infrastructural power of the European Union (EU)'s legal order has evolved over space and time within member states. We argue that the enforcement of EU law in domestic courts via the EU's preliminary reference procedure has diffused spatially and temporally, yet both structural demand and the mobilizing efforts of institutional change agents cannot fully account for this process. Instead, the pattern and pace of the EU's domestic entrenchment is shaped by pre-existing state institutions – particularly by the organization of domestic judiciaries. To assess this claim, we compare patterns of reference activity across France – a unitary state with a centralized judiciary – Italy – a weaker unitary state with a centralized judiciary – and Germany – a federal state with a decentralized judiciary. Promoting a geo-spatial turn in the study of EU law, we use an original geocoded dataset of preliminary references from national courts and leverage Geographic Information Systems (GIS) technology, statistical analysis, and qualitative evidence to demonstrate that the subnational reach of Europe's supranational legal order remains conditioned by domestic institutions.

I. Introduction

No polity exemplifies the process of political development via law better than the European Union (EU). Indeed, while scholars, European policy-makers and judges, and the EU's Treaties themselves all declare that the EU is a community based on the rule of law,² advancing the rule of law is not just a normative aspiration, it is the Union's primary mode of governance. Given its limited fiscal resources and the weakness of its administrative apparatus,³ the EU relies heavily

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² Vivian Reding Speech: http://europa.eu/rapid/press-release_SPEECH-13-677_en.htm; Lisbon Treaty Article 1a; Case 294/83 *Les Verts v. Parliament* [1986] ECR 1339, para. 23.; Kochenov (2009); Pech (2009).

³ While EU Treaties and legislation are binding, no European army or police exists to coerce compliance; The EU's budget relies upon customs duties and semi-voluntary state contributions

on a judicialized mode of governance, enlisting private litigants, national courts and European courts to pursue its policy objectives (Kelemen 2011). The EU is not a state in the traditional, coercive sense, and in light of low levels of public support for deeper European integration, it is unlikely to ever become one.⁴ Nevertheless, the EU polity can be conceptualized as a modern version of what medieval historian Joseph Strayer (1970) called a “law-state” – a political order constructed principally through the progressive expansion of state judicial institutions.⁵ That is Europe’s political development relies upon the expansion of EU judicial institutions and progressive incorporation of national courts and judges into a pan-European judicial order.

While the existing literature has emphasized that the EU judicial order is central to the political process of European integration, it has not been as attentive to how European governance is a process structured across both space and time (Hall 2010). For the EU, as for any state or polity, the capacity to govern in practice depends on the geographical extent and temporal consistency with which it exercises authority across its territory. As Mann (1984) puts it, the strength of a state depends on its *infrastructural power*: Its institutional capability to exercise authority and implement policy throughout the territory it seeks to govern.

For a political order like the EU that seeks to rule principally through law, spatio-temporal measures of the reach of the regime’s judicial authority arguably provide the best gauge of its infrastructural power.⁶ In this light, a powerful indicator of the reach of the EU’s judicial

and is quite limited, amounting to just one percent of Europe's GDP – only 6% of which is allocated to administration (European Commission 2015a). The executive body of the EU – the European Commission – is staffed by just 33,000 employees – comparable to the civil service of a medium-sized European city (European Commission 2015b).

⁴ Weber (1921) defined the state as, “a human community that (successfully) claims the *monopoly of the legitimate use of physical force* within a given territory,” which is mirrored by Tilly’s definition of the state (Tilly 1992).

⁵ See Fukuyama (2012, 271) and Berman (1983, 406) on the concept of states built primarily through subsuming pre-existing local legal orders into the new overarching legal order of the larger polity being created.

⁶ Infrastructural power is a thick concept that can be measured by multiple indicators (Soifer 2012), and the appropriate indicators will vary depending on the character of the polity in

authority is the use of the preliminary reference procedure (under Article 267 of the Treaty on the Functioning of the European Union (TFEU)). The procedure empowers (and sometimes requires) any national court to refer a question on the interpretation of EU law to the European Court of Justice (ECJ) in Luxembourg. It is a primary mechanism through which the EU judicial order exerts its authority within member states, and serves as a transmission belt linking the European judges in Luxembourg with the national courts. That is, use of the procedure not only bolsters a decentralized system of EU judicial enforcement, but it also ensures that important signals of state or regional non-compliance will percolate upwards to European institutions, enabling the ECJ in particular to “see like a state” as it exercises its authority (Scott 1998). In short, use of the procedure reminds us that in Europe, national courts are not simply national: As supranational EU rules are “layered” upon pre-existing national laws, domestic judges are “converted” into European judges of first instance, treaty-bound to respect the supremacy of EU law and to apply it where relevant in cases before them (Mahoney and Thelen 2010, 16-22).

But what do we know about the penetration of the European judicial order via the reference procedure across the territory of EU member states over the past six decades? Pioneering work by scholars such as Alter (2001), Weiler (1991), Burley and Mattli (1993), Stone Sweet (2000, 2004) has explained how a mutually empowering relationship between the ECJ in Luxembourg and low-level domestic judges in the six founding member states who referred cases to it played a crucial role in the early development of the EU’s supranational legal order. Additionally, more recent studies have examined cross-national variation in the rate of references from national courts and across policy areas (Wind 2010, Chalmers and Chaves 2012, Stone Sweet 2004), while other ‘impact studies’ (ex. Martinsen 2015) have focused on the extent to which particular EU rules are applied across various member states (see Treib 2008 for a review).

Yet we still know little about how the incremental layering of EU law upon national law and the conversion of national judiciaries into European courts of first instance has evolved over space and time, and we lack a theory that might explain this evolution. As a result, fundamental questions about the reach of the EU’s judicial order across space and time remain unanswered,

question, from the proliferation of its bureaucratic offices, to tax collections, to the maintenance of military garrisons, to the presence of courts.

questions such as: How has the spatial reach of EU law evolved over time, both within member states and across member states? Does the spatial penetration of EU law vary across member states? And, most importantly, what explains these varied spatio-temporal patterns? The answers to these questions may have implications far beyond the EU, as they speak to processes of political – whereby newly-created institutions and practices must contend with and be built within a pre-existing institutional environment – that historical institutionalists have traced in many domestic polities (Orren and Skowronek 2004; Mahoney and Thelen 2010; Ziblatt 2007). Indeed, the underlying question we explore is how a new, overarching system of law spreads over space and time as its proponents run into a set of pre-existing and well institutionalized legal orders resistant to their own displacement.

Existing theories of European legal integration do not directly address these questions concerning spatial dynamics, yet we can extend their reasoning to yield some broad expectations. Generally, arguments rooted in neofunctionalism and related institutionalization perspectives (Stone Sweet 2010, 16-22) should expect EU law litigation to spread spatially through an “expansive, self-sustaining process” of mutual empowerment between low-level judicial actors and the ECJ (*ibid.*, 16; Jupille and Caporaso 2009). Conversely, intergovernmentalist perspectives and related arguments emphasizing the enduring power of national institutions (Garrett 1992; Carrubba, Gabel, and Hankla 2008) might expect national governments and other apex state institutions – such as supreme courts – to be able to control the spread of EU law litigation in keeping with their national preferences, thereby mitigating a self-reinforcing process of Europeanization and judicial empowerment driven by lower-level courts.

We propose an argument that melds aspects of both perspectives, building on historical institutionalist studies of how national institutions channel – even if they do not strictly control – the forces associated with European integration (Fioretos 2011). We argue that while growing structural demand for EU law and the efforts of Europeanist change agents has diffused preliminary reference activity over time within EU member states, its spatio-temporal pattern will be shaped by domestic institutional structures – particularly the organization of the domestic judiciary.⁷ How domestic judicial orders are structured determines the degree to which national,

⁷ We use the term “diffusion” colloquially and interchangeably with “spread” and “penetration,” rather than in the stricter sense implying a causal mechanism in which the introduction of a

apex institutions – like supreme courts and national governments – can control the use of the reference procedure and thus the penetration of EU law. In other words, entrenched domestic institutional structures will condition the spatio-temporal penetration of the EU legal order, determining whether the layering of EU law and the conversion of member state judiciaries follows a more center-driven, intergovernmentalist logic or a more bottom-up neofunctionalist logic.

To explore these questions, we deploy tools of geospatial analysis (using geographic information systems (GIS) technology) that, while common in other fields of study,⁸ are altogether novel in EU studies⁹ and have been applied only rarely in the study of law and courts more generally (see Ingram 2016 for an important recent exception). We begin in section II by elaborating our argument and deriving a number of empirically-testable hypotheses. In section III, we then assess the validity of these hypotheses across three of the six founding members of the EU – France (a unitary state with a centralized, hierarchical judiciary), Italy (a weak unitary state with a centralized, hierarchical judiciary), and Germany (a federal state with a decentralized judiciary). In section IV, we conclude and consider the implications of this study.

practice at time t in location A increases the likelihood of the adoption of the same practice in proximate locations at time $t+n$. Though we do conduct analysis of issue-specific spatial clustering of EU law litigation, we focus on how the exposure to local conditions – such as intense trade activity, or the presence of a high court - influence the uptake of EU law, rather than strictly cross-jurisdictional diffusion processes per se. Further, our analysis examines how entrenched domestic institutions shape the structure of the EU legal order's reach within the territory of member states, rather than on specific spillovers from one jurisdiction to another.

⁸ Such geospatial approaches are frequently employed in fields of study such as criminology (Chainey and Ratcliffe 2005) and epidemiology (Zulu et al. 2014) and are increasingly used in subfields of political science such as American politics (Cho and Gimpel 2012), comparative politics (Franzese and Hays 2008, Cammett and Issar 2010, Stasavage 2010), and international relations (Schulz 2015, Gleditsch and Ward 2006).

⁹ See Kelemen and Pavone 2016 for a plausibility probe of this approach in the EU context.

II. Theory: Domestic Judiciaries and the Political Geography of EU Law Litigation

Lord Denning once famously characterized EU law as an incoming tide, saying, “it flows into the estuaries and up the rivers. It cannot be held back.”¹⁰ Most scholars of the EU legal system share Denning’s view. That is, a rich body of research finds that European legal integration has been an expansive process, leading to a dramatic expansion over time of the range of policy fields addressed by EU law, the group of actors with specialized knowledge of EU law, and the volume of EU law litigation via the preliminary reference procedure.

This research generally stresses both the effects of structural variables and the impact of institutional change agents. On the structural side, demand-centric cross-national analyses have uncovered a positive correlation between preliminary reference activity and trade (Stone Sweet and Brunell 1998), GDP per capita (Tridimas and Tridimas 2004), and population levels (Vink et al. 2009). Importantly, in the only subnational statistical analysis of the impact of structural variables on EU law litigation to date, Kelemen and Pavone (2016) uncover that population levels serve as by far the strongest predictor of preliminary references.

On the institutional and agentic side, scholars such as Stone Sweet, Brunell and Fligstein have traced how “the activities of market actors, lobbyists, legislators, litigators, and judges had become connected” in ways that “constituted a self-reinforcing system” leading to the steady expansion of the EU legal order (Stone Sweet 2010, p. 17). Likewise, a group of socio-legal scholars and historians has demonstrated that a distinctive group of actors (including large law firms, specialist ‘Euro-lawyers’, academics, judges, and non-governmental organizations (NGOs)) possessing specialist knowledge of EU law have actively promoted the spread of EU law litigation (Vauchez and de Witte 2013). Particularly via superior knowledge and material resource stocks, the mobilization of “repeat players” (Galanter 1974), such as large law firms specialized in EU law (Conant 2002; Kelemen 2011; Vauchez and de Witte 2013), has constructed what some scholars label as a ‘European legal field’, along with the diffusion of preliminary references to the ECJ.

While the causal mechanisms stressed by the existing literature differ, the observable implication of all the foregoing studies is that European law has incrementally begun to embed itself within domestic legal orders, largely via the diffusing use of the preliminary reference

¹⁰ See *HP Bulmer Ltd v J Bollinger SA* [1974] Ch 401 at 418.

procedure. However, our argument, to which we now turn, assumes that even when we take structural demand and institutional change agents into account, there will remain unexplained variation in the spatial and temporal pattern of preliminary reference activity linked to the relations of authority within domestic judiciaries.

A. The Spread of Preliminary Reference Activity Across Time and Space

First, consider decentralized judiciaries, such as the German one, comprised of relatively autonomous, functionally differentiated, and specialized subunits. The autonomy of these regionally organized judiciaries – where judges are locally recruited, appointed, promoted, salaried, and disciplined – means that lower and mid-level judicial actors will possess the discretion necessary to innovate – an element that has been stressed as fundamental by the scholarship on bureaucratic innovativeness (Carpenter 2001, Teece 1996, 197-205). The local ties of judges in a decentralized judicial system also increases the likelihood that some will perceive complementarities (Bums and Stalker 1961, Teece 1996: 197-205, Strang and Soule 1998, 270) between EU law and local forms of domestic litigation, thereby choosing to send references to the ECJ. Yet, while local control and flattened relations of authority facilitate policy innovation, these same institutional structures also inhibit the rapid and uniform spread of innovations across the judicial system. That is, the very autonomy and specialization that render an innovation possible can also compartmentalize its adoption. And the lack of streamlined, vertical channels of authority limits the ability of central actors to quickly monopolize or mandate adoption (Strang and Meyer 1993, Paul and Langlois 1995, Teece 1996, Strang and Soule 1998). The observable implication is that in decentralized judicial orders, use of the reference procedure is unlikely to be uniform or to be speedily monopolized by judges at the apex of the domestic judicial hierarchy. Rather, its uptake should proceed gradually, unevenly, and from the bottom-up, with reference rates becoming intense in some regions and scarce in others. This incremental and bottom-up process is consistent with neofunctionalist narratives of European legal integration driven by the growing incorporation of lower national courts within a pan-European judicial order.

All of these dynamics should play out very differently in centralized and hierarchical judiciaries – such as that of France – where judges are recruited, appointed, salaried, and disciplined by national institutions. We theorize that centralized and hierarchical judiciaries are

likely to limit the autonomy of inferior judges and to temper functional differentiation and specialization. Because innovative decision-making in centralized organizations requires approval from the top echelons of the authority structure, hierarchical judiciaries are likely to resist a culture of autonomy and local innovativeness amongst its lower ranks (Kim 1980, Teece 1996, 197-200; 211). Furthermore, the greater integration of the judicial sub-units within the hierarchy, combined with the central role played by powerful superior courts, limits functional specialization and instead incentivizes institutional isomorphism and homogeneity of practices across the judiciary (DiMaggio and Powell 1991, 69; Powell and DiMaggio 2012). In this type of centralized, hierarchical context, we are less likely to observe either significant bottom-up driven innovation or cross regional differences in judicial practices. If use of the reference procedure diffuses, it is likely to do so with the explicit approval of the upper echelons of the judiciary. Further, a novel practice such as the reference procedure can be more rapidly adopted throughout a centralized judiciary (Paul and Langlois 1995, 556), since centralized institutions facilitate “much broader diffusion processes, since their effects do not vary across sites or adopters” (Strang and Meyer 1993, 490-494). But while diffusion may proceed more rapidly, it may also be reversed more rapidly. If high courts signal to their inferiors that they should limit references to the ECJ – as a result of political pressure against the practice or a desire to monopolize dialogue with the ECJ – then we would expect the geographic spread of the practice to slow or reverse. In other words, superior courts in centralized judiciaries can more strongly influence the pace of adoption of reference activity in their country – positively or negatively, in line with more intergovernmentalist perspectives stressing the role of preferences of central state actors. These considerations lead us to two closely related hypotheses:

H1a: The more hierarchically centralized a state’s judiciary, the greater the temporal variability in spatial coverage of EU law litigation via the preliminary reference procedure.

H1b: The more decentralized a state’s judiciary, the greater the inter-regional variation in levels of EU law litigation via the preliminary reference procedure.

B. The Spatial Clustering of Preliminary Reference Activity

A political geography perspective also sheds light on patterns of spatial clustering. A rich literature in the field of economic geography demonstrates that agglomeration effects driven by

local “knowledge spillovers” can help generate path-dependent local clusters specializing in particular industries (Krugman 1991, Audretsch 1998, Feldman 1999). Similarly, because spatial proximity facilitates the localized diffusion of knowledge and judicial practices regarding specific fields of law, one should expect “hotspots” focusing on specific legal issues to emerge in EU member states. The distribution of such hotspots, however, may vary depending on domestic institutional structures.

First, hotspots of EU law litigation may emerge within member states in locations where a subset of EU rules are particularly relevant to the local socio-economic context. For instance, hotspots of trade-related litigation – particularly rules governing the free movement of goods and services – might emerge in locations near ports where maritime trade activity is concentrated, while hotspots of litigation relating to mergers and acquisitions might emerge near the country’s financial hubs. This would reflect the common exposure of such locations to social or economic activities regulated in part by EU rules. Further, superior courts (of appeal or last instance) specializing in EU law may generate knowledge spillovers and other agglomeration effects to spatially proximate areas. For instance, a city that is home to a high court that frequently refers cases to the ECJ concerning a specific issue area may attract a cluster of specialized EU legal practitioners to locate in its proximity, and these practitioners may then apply their legal expertise before other (lower) courts in the area.

While we expect issue-specific spatial clustering would emerge in any member state, it should be more pronounced in countries with decentralized judiciaries, where courts possess the jurisdiction and flexibility necessary to respond to local demands and to develop location-specific practices regardless of whether they are promoted by their state’s highest courts. Meanwhile in states with more hierarchically centralized judiciaries, the tendency toward issue-specific spatial clusters in particular locales should be tempered by the standardization of judicial practice throughout the territory. This causal reasoning leads to two closely related hypotheses:

H2a: The use of the preliminary reference procedure will exhibit issue-specific spatial clustering.

H2b: The more decentralized a state’s judiciary, the greater the extent to which use of the preliminary reference procedure will exhibit issue-specific spatial clustering.

III. Case Selection and Data

Case selection and conceptualizing judicial (de)centralization

To assess how the spatial diffusion of EU’s preliminary reference procedure has evolved over time and is shaped by the organization of domestic judicial systems, we focus our analysis on France, Italy, and (West) Germany. The selection of these three cases is desirable for several reasons. First, France, Italy, and Germany were three of the original six EEC member states. Thus, the diffusion of EU law litigation commenced at a similar time in these states, which ensures comparability, and has spanned over five decades since the inception of the system, which enables us to probe long-term, subnational trends. By contrast, states that joined the EU at a later date may be less comparable and susceptible to “newcomer effects.”¹² Second, French, Italian, and German courts have been the most prolific referrers of cases to the ECJ, which means that by analyzing the subnational penetration of the EU legal order across the three countries we are accounting for a large share of the total reference activity across the EU. Finally, the structure of French, Italian, and German state institutions varies in ways that enable us to assess our theoretical claims.

Specifically, France is a unitary state that boasts a centralized, hierarchical judiciary; Italy is a weaker unitary state with a centralized, hierarchical judiciary; and Germany is a federal state with a decentralized judiciary and flatter relations of authority. Of course, we are not the first to study the relative centralization or decentralization of state institutions, and this multi-dimensional concept has been measured with a variety of indicators (Treisman 2002, Ziblatt 2007, Hooghe et al. 2016). First, we draw upon Hooghe et al. (2016)’s new “Regional Authority Index” (RAI), a composite measure of ten dimensions of state decentralization,¹³ which capture the “self-rule” capacity of subnational jurisdictions as well as their ability for “shared rule,” or to influence national policymaking. By Hooghe et al.’s (2016) measure, where a lower RAI score

¹² For this reason we focus on preliminary reference activity from courts in West Germany, and exclude their East German counterparts, who joined the EU legal order decades later.

¹³ These dimensions are: institutional depth, policy scope, fiscal autonomy, borrowing autonomy, representation, law making, executive control, fiscal control, borrowing control, constitutional reform.

indicates greater centralization of authority, France is more centralized (with an average RAI score of 13.6) than Italy (17.4), and both are much more centralized than Germany (34.7).

While the degree to which the state is centralized or decentralized is relevant to our argument – as any judiciary is embedded within a broader political context that influences its operation – we are more precisely interested in the organization of national judiciaries. For this reason, we also rely on a new measure of judicial decentralization developed by Vallbe (2014) which aims to be a judiciary-specific analogue to the RAI: The Judicial Regional Authority Index (JRAI). The JRAI is divided into multiple dimensions, of which seven are of particular interest here: (1) regional judicial recruitment autonomy, (2) regional judicial administrative autonomy, (3) regional judicial design autonomy, (4) regional economic judicial autonomy, (5) regional capacity of final judicial decision, (6) national judicial representation of regions, and (7) national judicial executive control of regions.

Based on these seven constitutive dimensions of the JRAI, Table 1 displays the organization of the French, Italian, and German judiciaries. Clearly, although the French judiciary is embedded within a more centralized state structure than is the Italian judiciary (according to their RAI scores), both are equally centralized. By contrast, the German judiciary is not only embedded within a federal state, but it is itself very decentralized. As Bell (2006, 110) underscores, “the [German] court system is predominantly a Land [regional] matter and most judges are Land civil servants. Rules on legal education, appointment and promotion are specific to a particular Land.” By contrast, recruitment, appointment, and promotion in France and Italy is centralized in their respective Judicial High Councils, court funding and judicial salaries are determined by their Ministries of Justice, and subnational jurisdictions play no direct fiscal, disciplinary, or administrative role.

One benefit of focusing on the relative centralization of the judiciary is that judiciaries have been resistant to decentralizing reforms over time. For example, whereas the Italian regions have been delegated greater authority over time, causing Italy’s RAI score to grow from 10 to 27.3 between 1950 and 2010, its JRAI score has remained stable during the same period (ranging between 0.04 and 0.06). However, because the political dynamics within national states are driven by interactions between member state bureaucracies – including between the judicial branch and the political branches – focusing exclusively on the JRAI score would lead to an inaccurate assessment of centralization for our purposes. For example, in states with centralized

political institutions, national parliaments may more effectively wield their power to influence the decisions of apex courts, whereas the circumscribed powers of parliaments in decentralized states limits their ability to influence judicial decision-making in an effective and uniform way. Since we treat a national judiciary as a bureaucratic organization embedded within a broader political order, we weigh the RAI and the JRAI equally. Hence our expectation is that centralizing dynamics should be greatest in the French judiciary and lowest in Germany, with Italy falling between the two.

Data

Our empirical analysis is based on an original dataset of the city of origin (geolocation) of every reference for a preliminary ruling submitted by a French, Italian, and (West) German court to the ECJ from 1964 to 2013. This amounts to 769 references from France, 1,223 references from Italy, and 1,722 from West Germany (total $n=3,714$). In order to employ spatial statistics for parts of our analysis, it is necessary to aggregate these data into territorial units. For precision, we choose to aggregate at the lowest common territorial unit of organization across the three countries: The NUTS3 level, or the French department, Italian province, and German district.¹⁴ As a control for demographic demand for some of our analyses, we match the reference data at the NUTS3 level with official population data obtained from the three countries' respective State statistical agencies. While a number of structural or socioeconomic factors have been used to predict preliminary reference activity, a number of other scholars (ex. Vink et al. 2009) have found that population levels are the most temporally and geographically consistent correlates of EU law litigation, which bolsters our confidence in population serving as a strong control. Because we were only able to obtain these data since 1975 in France and since 1981 in Italy, the temporal frame of those analyses that use population as a control is necessarily restricted, but still spans over three decades.

¹⁴ NUTS (*Nomenclature des unités territoriales statistiques*) are standard territorial units established by Eurostat.

Table 1: The judicial organization of France, Italy, and Germany

	Centralization of Overall State Structure <i>(low RAI=more centralized)</i>	Regional Judicial Recruitment Autonomy <i>(0=none; 4=full)</i>	Regional Judicial Administrative Autonomy <i>(0=none; 3=full)</i>	Regional Judicial Design Autonomy <i>(0=none; 1.5=full)</i>	Regional Economic Judicial Autonomy <i>(0=none; 5=full)</i>	Regional Capacity of Final Judicial Decision <i>(0=none; 3=full)</i>	National Judicial Representation of Regions <i>(0=none; 3=full)</i>	National Judicial Executive Control of Regions <i>(0=none; 3=full)</i>
France	unitary state; avg. regional authority index (RAI) Score = 13.6	0=regions have no role in recruiting staff for admin. of justice or judicial branch	0= no admin. of justice at regional level (no independent regional court system)	0=no match between boundaries of judicial districts & regions, & region does not intervene in redistricting	0=region does not provide any resource to admin. of justice	0=there is no final court of appeal in the regions	0=regions do not intervene in appointment of members of national High Courts	2=regions participate in appointment of some members of governing body of judiciary (mixed appointment)
Italy	unitary state; avg. regional authority index (RAI) Score = 17.4	0=regions have no role in recruiting staff for admin. of justice or judicial branch	0= no admin. of justice at regional level (no independent regional court system)	0=no match between boundaries of judicial districts & regions, & region does not intervene in redistricting	0=region does not provide any resource to admin. of justice	0=there is no final court of appeal in the regions	0=regions do not in appointment of members of national High Courts	2=regions participate in appointment of some members of governing body of judiciary (mixed appointment)
Germany	federal state; avg. regional authority index (RAI) Score = 34.7	4=regions recruit admin. staff, specialized staff, prosecutors, & judges in their jurisdiction	3= regional admin. of justice to deal with both civil & criminal issues (independent regional court system)	1.5=boundary match of districts & region, & region has exclusive capacity to create or eliminate districts	5=region provides material resources, pays salaries of admin. staff, specialists, prosecutors, & judges	1=there is a final court of appeal in the region, but only for minor civil and/or criminal offences	2=regions intervene in appointment of members of national High Courts jointly with central decisional bodies	3=regions determine composition of members of governing body of judiciary & have full competence to discipline judges

Notes: Indeces in columns 2-8 based on the Judicial Regional Authority Index (JRAI) by Vallbe (2014); Regional Authority Index in column 1 is from Hooghe et al. (2016); Source for German judicial characteristics is Vallbe (2014); Source for French judicial characteristics is Bell (2006), Ministère de la Justice (2012), and Code de La Justice Administrative, Article L133-3; Source for Italy is Vallbe (2014), Casonato and Woelk (2008), Corte Costituzionale (2012), and Regio Decreto 30 January 1941 no.12, Article 65.

IV. The Diffusion of Preliminary Reference Activity Across Time and Space

H1: The European Legal Field and the Diffusion of Preliminary References

It is well known among scholars of EU law that the total number of references sent from national courts to the ECJ has increased dramatically over the past six decades. However, little is known about how the spatial distribution of these references within member states has evolved over time. To explore this, we use GIS and spatial statistics to map and analyze the spatial diffusion of EU law litigation. Before explicitly testing our causal hypotheses, we first present an introductory set of maps to visualize the diffusion of the preliminary reference procedure, along with econometric evidence consistent with the claim that structural demand and the role of institutional change agents are insufficient explanations for said diffusion.

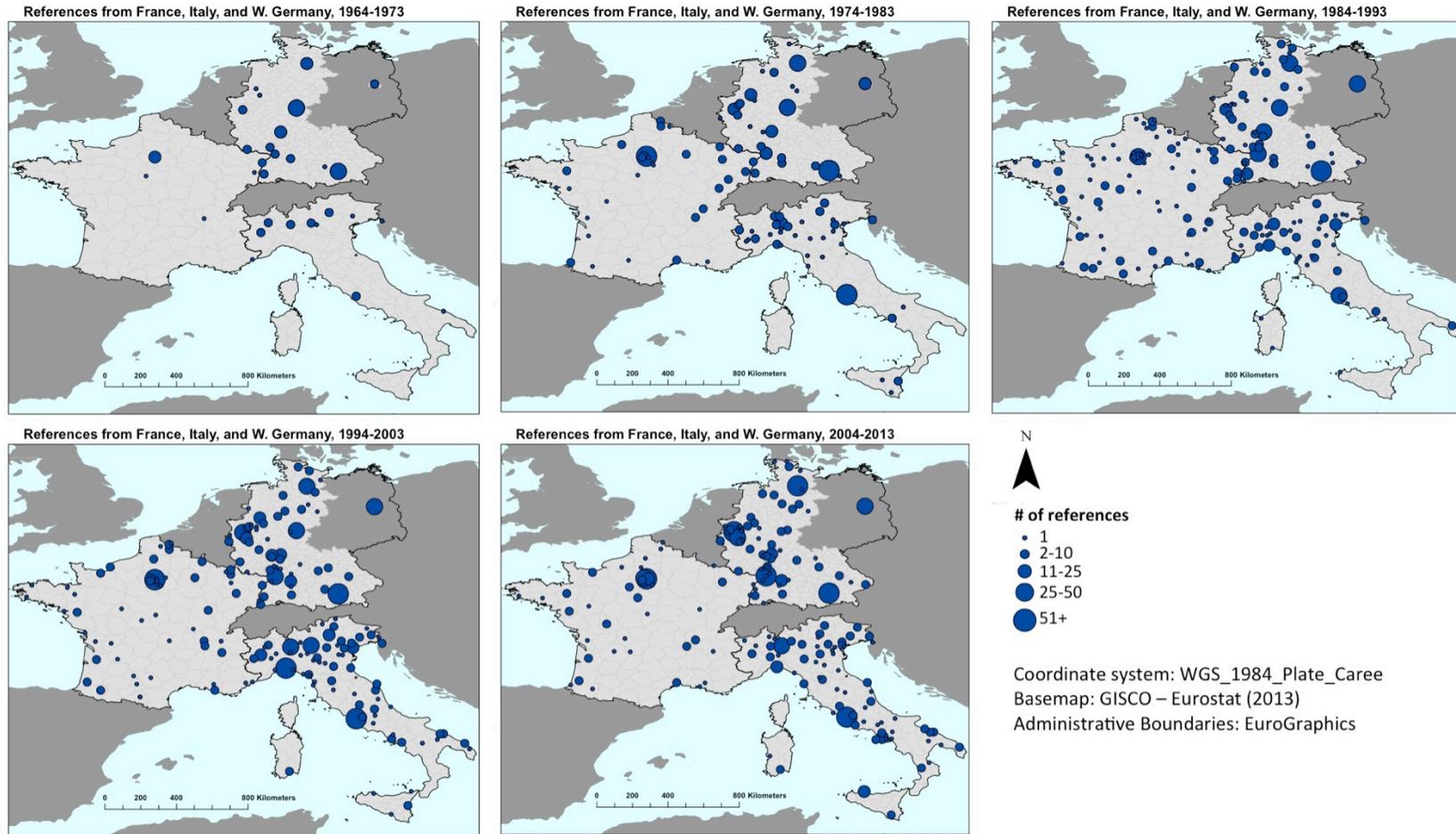
First, Figure 1 maps preliminary references originating from France, Italy, and (West) Germany from 1964 to 2013, showing the total number of references by decade based on their city of origin (with larger circles indicating more references originated from that city within a given decade). Descriptively, Figure 1 shows that the use of the reference procedure has grown not just in quantitative terms, consistent with existing research, but has also spread spatially. That is, not only is EU law litigation via the reference procedure on the rise, but referring courts are distributed over a greater proportion of a state's territory.¹⁵

But beyond descriptive statistics, our empirical premise is that structural variables and the role of legal pioneers insufficiently explains spatio-temporal patterns in preliminary reference activity. To establish the plausibility of this premise, we construct an original dataset that contains the number of yearly preliminary references within each NUTS3 region – roughly the city/provincial level, or the lowest level of administrative organization recognized by Eurostat. We then linked each NUTS3 region-year observation with a proxy measure for structural demand and for the mobilizing role of institutional change agents.

For structural demand, we follow Vink et al. (2009) and Kelemen and Pavone (2016) by relying logged population. There are three reasons for this choice. First, Vink et al. (2009)'s cross-national analysis found that population levels are not only a significant predictor of

¹⁵ Below (see figures 3-5 and accompanying text), we offer a more detailed analysis of the evolving spatial penetration of the EU legal order in France, (West) Germany and Italy.

Figure 1: *Origins of Preliminary References from Italy, France, and (West) Germany, 1964-2013*



preliminary reference activity, but that accounting for population washes out the effects of other covariates, such as trade activity. Second, the only subnational quantitative analysis of the correlates of preliminary reference activity confirmed that Vink et al.'s (2009) findings at the cross-national level also hold at the subnational level (Kelemen and Pavone 2016). That is, population appears to be the best and most robust predictor for structural demand for EU law via the preliminary reference procedure. Finally, whereas Eurostat data at the NUTS3 level is available for all three of the countries of interest from the mid-1970s onwards – which allows us to increase the number of observations and the temporal reach of our analysis – other data, such as GDP per capita or export activity, is only available at the NUTS3 level in more recent years.

As a proxy for the role of institutional change agents, we are most interested in taking seriously the causal arguments posited by sociolegal scholars of the ‘European legal field.’ While no single measure can capture the spatial growth of the European legal field and its correlation with the spread of EU law litigation, the spread of what we call “Euro-firms” – corporate law firms with recognized expertise in EU law – provides a powerful indicator.¹⁶ We thus rely on an original geocoded dataset of the number of firms in a given NUTS3 region (in a given year) ranked in the *Legal 500* and *ChambersEurope*, which are usually large (with 100+ lawyers), global (with offices in more than one country – particularly in Brussels, where most EU institutions are located), and boast prominent lawyers holding prestigious positions in nearby law schools. These data were obtained via the websites of the firms ranked by either the *Legal 500* and *Chambers Europe* with offices in Italy, France, and (West) Germany. In short, we treat the number of branch offices of one of these Euro-firms in a given NUTS3 region to be a reasonable proxy of the heightened presence of “repeat-players” mobilizing for institutional change and for the construction of the European legal field via the preliminary reference procedure.

For our econometric analysis, we use a negative binomial regression model – a standard technique for the analysis of overdispersed count data (like preliminary references to the ECJ). We regress the yearly NUTS3 reference rate on a NUTS3 district’s logged population, the

¹⁶ The data were obtained via the websites of the firms ranked by either the *Legal 500* and *Chambers Europe* with offices in Italy, France, and Germany. We consider the founding date of a branch office of one of these firms in a given city to be a relatively accurate proxy of the heightened presence of the European legal field in that location.

number branch offices of ranked Eurofirms in operation within said district.¹⁸ To account for unobserved inter-year variation (such as the influence of well-publicized EU Treaty changes) we include year-fixed effects. Crucially, we also include country-fixed effects to see whether unobserved, country-level factors – such as the structure of a state’s judiciary – have a significant effect upon preliminary reference activity even when accounting for population and the role of Eurofirms. Table 2 displays the econometric results of this analysis based on over 19,000 region-year observations.

Table 2: *Negative binomial regression of yearly references on the number of ranked Eurofirms and logged population (at the NUTS3 level) and country fixed-effects, 1975-2013*

<i>Independent Variables</i>	<i>DV: # Yearly Refs (NUTS3)</i>
# Ranked Eurofirms	0.104*** (7.67)
ln(Population)	1.617*** (33.22)
Constant	-23.83*** (-33.63)
Germany dummy	0.8563*** (9.23)
France dummy	0.101*** (-4.13)
Year Fixed-Effects?	Y
# of Observations	19440

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: z statistics are in parentheses; baseline category for country fixed effects is Italy. Results generated using negative binomial regression model with country and year fixed effects and heteroskedasticity-robust standard errors. The number of observations was 19,440. The data for France is for the years 1975 to 2013; for Germany it is for the years 1975 to 2013; and for Italy it is for the years 1982 to 2011.

As Table 2 demonstrates, although the density of Eurofirms and population levels are positively and significantly related with the frequency of use of the preliminary reference procedure (at the

¹⁸ Rankings are for 2016. For each ranked firm, its website, *Chambers Europe* and *Legal 500*, and newspaper articles were scouted for the date when firm branch offices located in a French, Italian, or German city were opened.

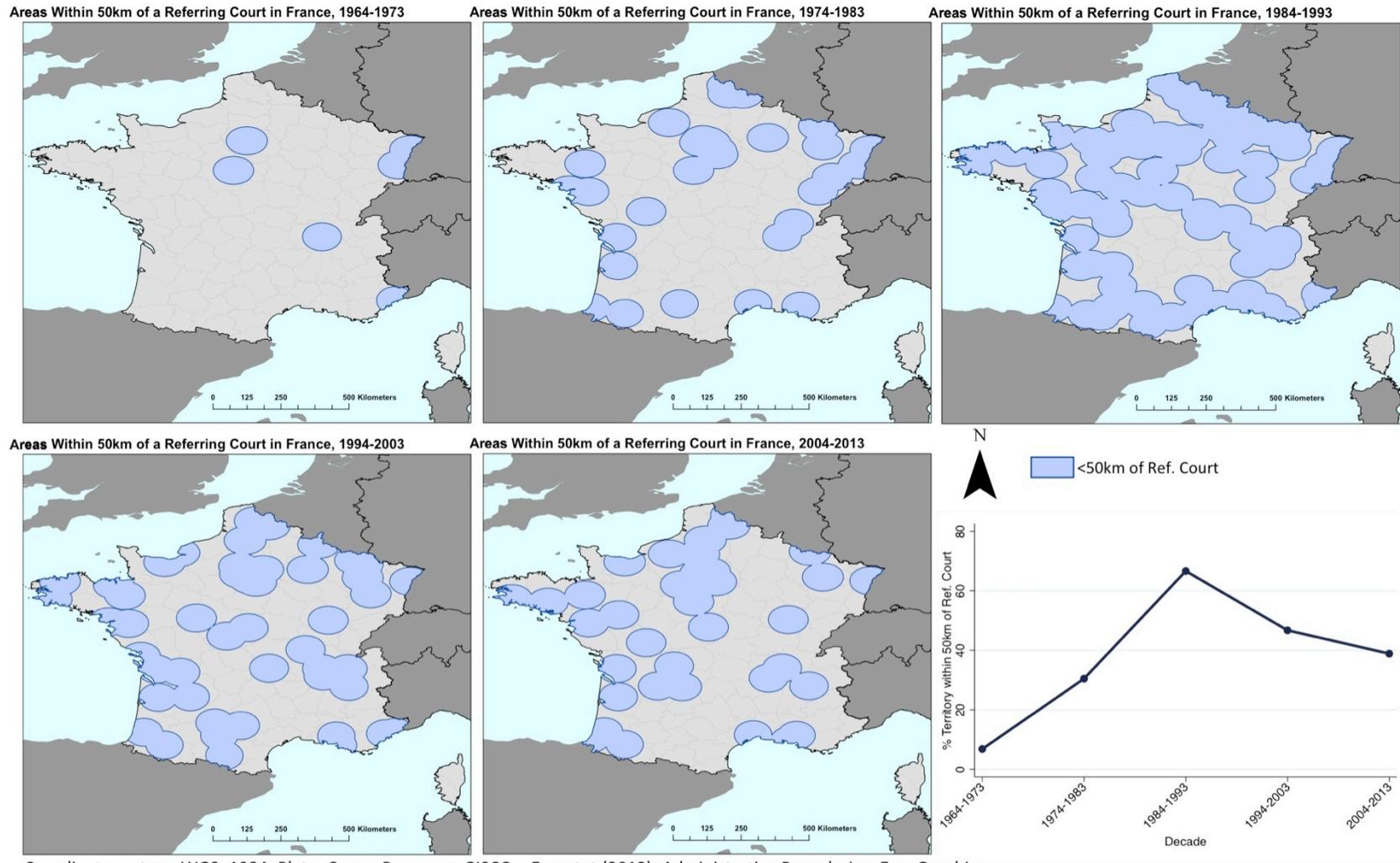
99% confidence level), there remain significant, unobserved country-level effects that influence preliminary reference activity (the partial regression coefficient for the indicator (or “dummy”) variables for Germany and France, with Italy serving as the baseline, are both statistically significant at the 99% confidence level). In the following sections, we conduct a three-country comparison to unpack this unobserved variation into its spatial and temporal components and assess its consistency with our hypotheses stressing the causal role of domestic judicial structures.

H2a: State Judiciaries and the Spatial Coverage of Reference Activity Over Time

The presence of unobserved variation across German, French, and Italian preliminary references when controlling for structural demand and institutional change agents requires us to consider how the pre-existing institutional landscape of member states may channel, constrain or facilitate the spread of the EU legal order. In particular, our first hypothesis (H2a) posits that the more hierarchically centralized a state’s judiciary, the more variable should be the pace of spatial diffusion of EU law. In a hierarchical, centralized judiciary, the high courts sitting at the apex of the system have great influence over the legal practices of subordinate courts. If those high courts signal to lower courts that they support their engagement with EU law, this should encourage the rapid spread of preliminary reference activity. On the other hand, if these high courts seek to monopolize reference activity or quash it altogether (perhaps due to political pressure from legislative or executive branch actors), lower courts will likely fall into line and reduce use of the procedure. By contrast, in decentralized judiciaries, because lower court judges have more discretion and are less subject to central authority structures, we expect the spatial diffusion of the reference procedure to be a more steady, incremental, bottom-up process that is resistant to the vicissitudes of national politics or the shifting preferences of superior courts.

To shed some descriptive light on the face validity of H1a, we generate a 50-kilometer buffer around each referring court in France, Italy, and Germany for the five decades spanning 1964 to 2013. These buffers visually display the proportion of each country’s territory (by decade) that is within a daily commuting distance of a court that has demonstrated its willingness to submit references to the ECJ. Figures 2-4 map these buffers by decade across France, Italy, and Germany.

Figure 2: *Locations within 50km of a Referring Court in France, 1964-2013*



Coordinate system: WGS_1984_Plate_Caree; Basemap: GISCO – Eurostat (2013); Administrative Boundaries: EuroGraphics

Figure 3: Locations within 50km of a Referring Court in Italy, 1964-2013

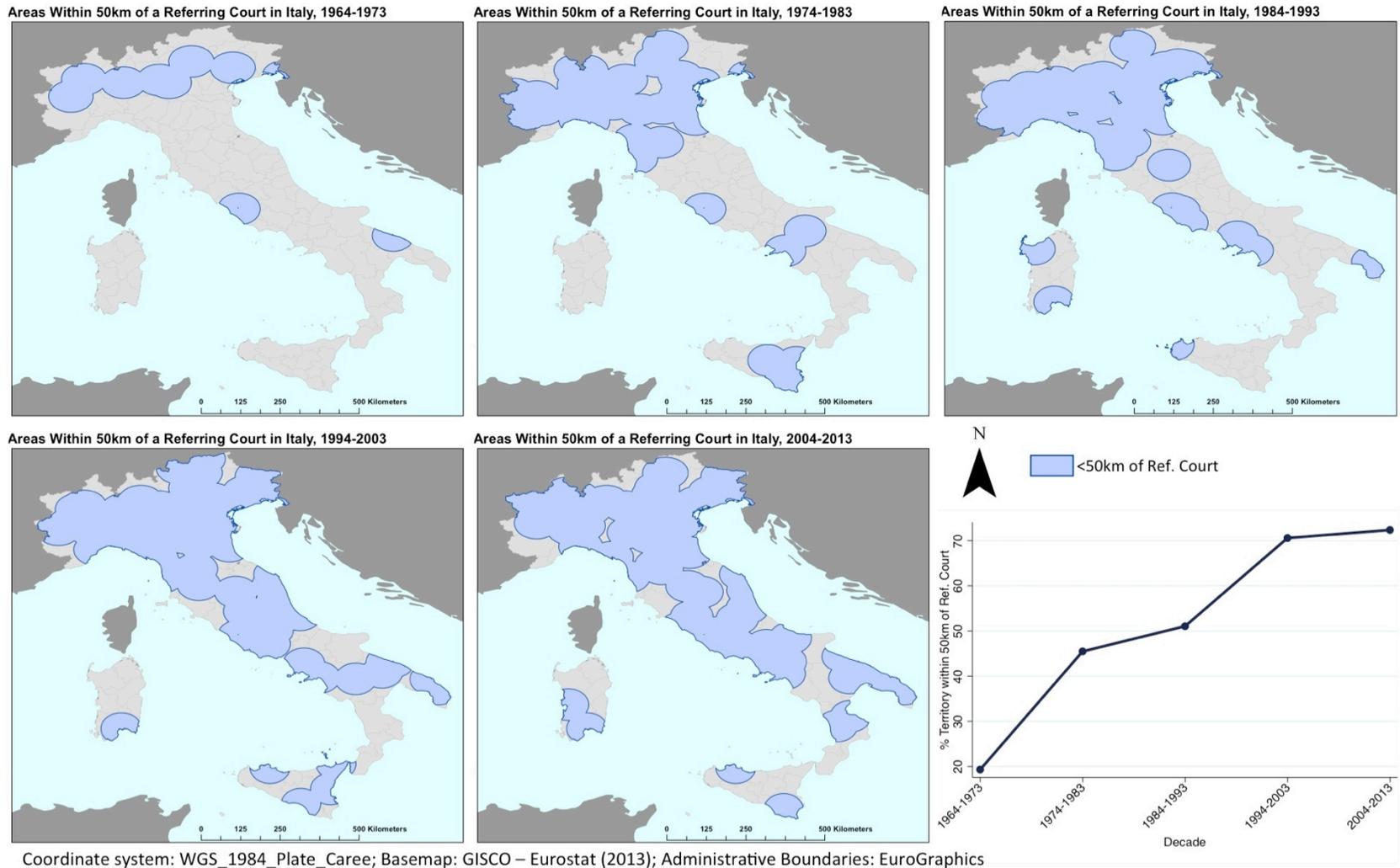
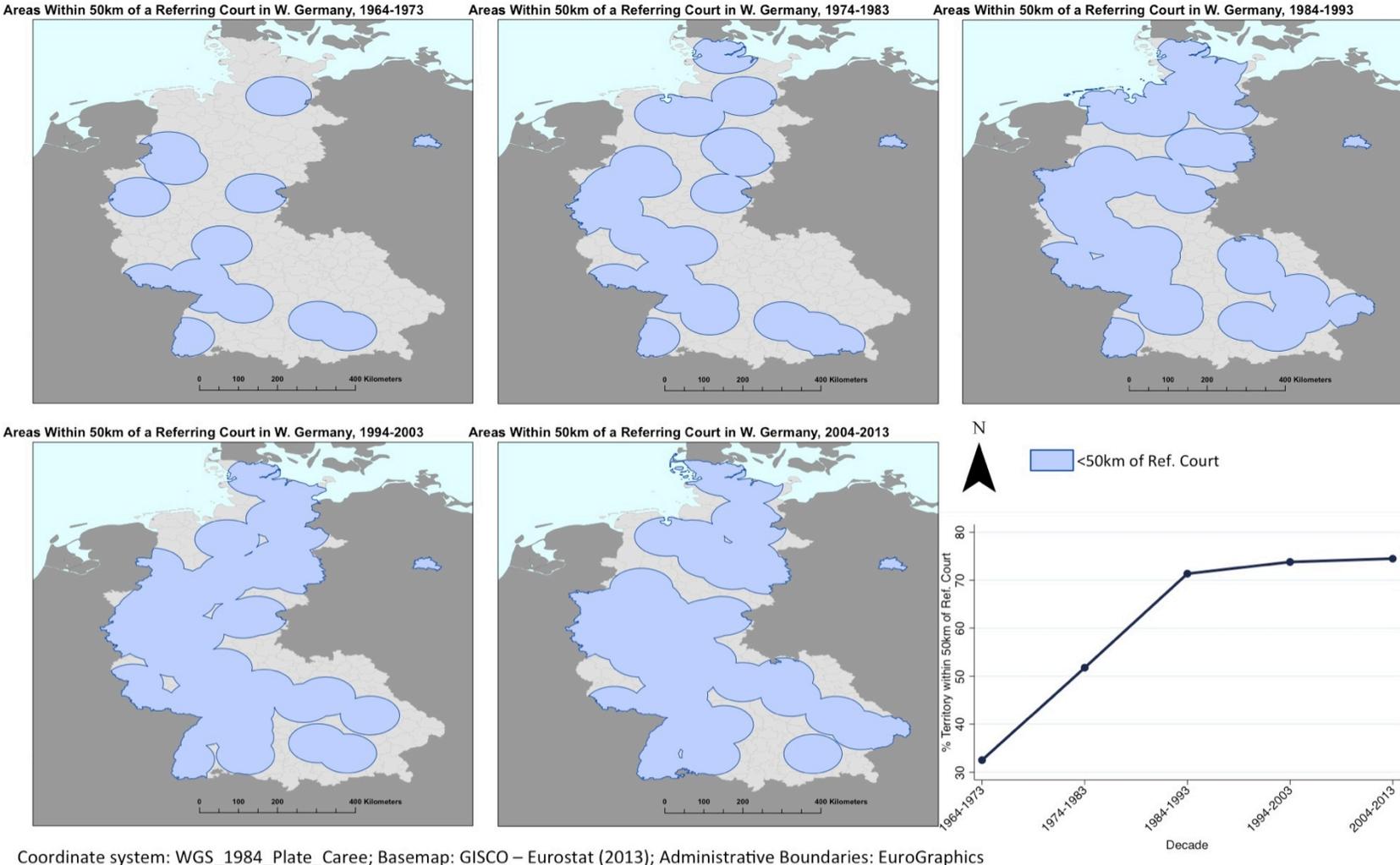
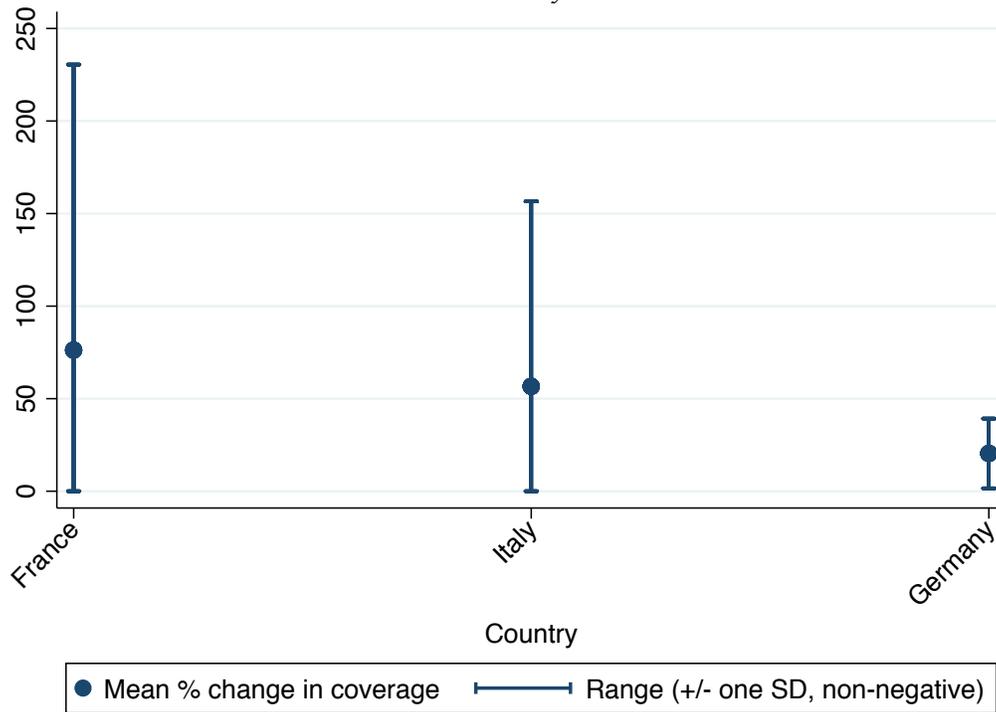


Figure 4: Locations within 50km of a Referring Court in West Germany, 1964-2013



A visual inspection of the figures reveals some patterns supportive of H1a. In France we note how negligible reference activity in the 1960s (with less than 7% of France’s territory within a 50km buffer) is quickly replaced by a rapid spatial diffusion of reference activity between 1974 and 1993 (peaking at over 66% of French territory falling within a 50km buffer). Thereafter, however, the process seems to reverse itself, with a noticeable decline in spatial coverage across the past two decades (falling to 38.8% of territory within a 50km from 2004-2013). By contrast, in Italy – and especially in Germany – reference activity has been rising steadily (with spatial coverage levels (territory within a 50km buffer) rising from 19.3% to 72.4% in Italy and from 32.50% to 74.5% in Germany) and is absent of any significant spikes or reversals in the process.

Figure 5: *Temporal Variability in Spatial Coverage of Reference Activity in France, Italy, & Germany*



To provide more direct evidence of the greater variability of spatial coverage in France compared to Italy and especially Germany, we compute the mean 5-year percentage change in the territory

falling within a 50km buffer for each country.¹⁹ We use 5-year intervals to capture more fine-grained, within-decade shifts in spatial diffusion. Figure 5 displays the results: Consistent with H1a, the average 5-year percentage change in the spatial coverage of reference activity is 76.2% in France, 56.6% in Italy, and only 20.4% in Germany.²⁰ The variability in these percentage changes is also greatest in France. For example, in 1969-1973 only 4.5% of French territory lay within 50km of a referring court, but from 1974-1978 this value rose rapidly to 23.57% - a percentage change of 482%. By contrast, in Germany the highest 5-year percentage change in territorial coverage is only 47.8% (from 1964-1968 to 1969-1973).

Note that another observable implication of H1a is that the greater temporal variability in spatial diffusion in centralized system should be due to the greater sensitivity of these judiciaries to the shifting preferences of supreme courts and the dynamics of national inter-branch politics. One observable implication is that supreme courts should – if they decide it is in their interest – be better able to monopolize the reference procedure in centralized judiciaries, whereas in decentralized systems reference activity from lower courts should incrementally grow and remain relatively unaffected by pressures from the apex of the judiciary. While a detailed parsing of the historical record to assess these implications falls outside of the scope of our paper, a preliminary overview of the evidence is supportive. That is, while supreme courts in all three countries are recentralizing use of the procedure within their chambers in recent years (see Appendix C), this trend is clearest in the French case. In recent years the number of references from the Cour de Cassation and the Conseil d’Etat has grown while the total number of yearly references from lower courts has dropped. Furthermore, only in France has the growing reference activity by supreme courts occurred at the same time that the spatial coverage of the reference procedure has become, once again, more concentrated in Paris (see Figures 2-4).

¹⁹ More precisely, we compute the absolute value of the 5-year mean percentage change in territorial coverage, since both increases and decreases in coverage constitute variability in spatial diffusion.

²⁰ In Appendix A, we provide the results for a one-way two-samples t-test for difference in means. While the results are just shy of statistical significance, this is likely due to small sample-size.

A brief analysis of the historical record suggests the reason for these shifts in reference activity in France. While in the 1970s “members of the Conseil d’Etat [...] made it clear that they were waiting for a political directive on what to do with EC law supremacy,” the Cour de Cassation was more willing to refer cases to the ECJ (Alter 1996: 486, see also Plötner 1998). The French Parliament acted swiftly: In 1979 “the French National Assembly tried to sanction the Cour de Cassation for accepting EC law supremacy by re-iterating a prohibition against French courts from setting aside national law. The Aurillac amendment was passed overwhelmingly in the National Assembly” (Alter 1996, 475). With the Conseil d’Etat resistant, the Cour de Cassation under attack, and the Parliament hostile to the ECJ’s authority, it is unsurprising that reference activity from supreme courts plummeted during the 1980s – a decline that was only partially offset by a timid rise in references by lower courts scattered throughout France. Yet in other member states – such Italy and particularly Germany – yearly reference rates were growing steadily, which prompted the French government to have a change of heart. Arguing before the Conseil d’Etat in the 1989 *Nicolo* case, the French Commissariat du Gouvernement tried to “cajole” the court into accepting the supremacy and direct effect of EU law (Weiler 1994, 522). The trickle of reference activity by French courts was denying France an adequate voice over the development of EU law, since “[s]o far as foreign courts are concerned... all I would say is that your Court is now the last which formally refuses to apply Community measures which are contracted by later laws” (Weiler 1994, 522). Rebuking the Government’s prior hostility to the procedure, the Commissariat added: “It cannot be repeated often enough that the era of the unconditional supremacy of internal law is now over” (Alter 1996, 369).

This political shift had a clear impact on French reference activity. The Cour de Cassation emerged with renewed confidence and a willingness to wield the ECJ’s preliminary rulings against the National government, and the Conseil began to follow suit.²¹ As quickly the share of reference activity from French supreme courts had plummeted in the 1970s and 1980s, in the last decade French superior courts have referred a majority of references originating from France (and, indeed, reference activity from dispersed lower courts has dropped). In other words,

²¹ For example, the *Cour de Cassation* forced the reluctant French government to implement the ECJ’s *Kohll* and *Decker* rulings in 2002, “a quantum leap pushing for [...] implementation” (Obermaier 2008, 743-744).

the greater variability of French reference activity seems to be driven – at least in part – by the shifting actions of French supreme courts and their volatile inter-branch politics.

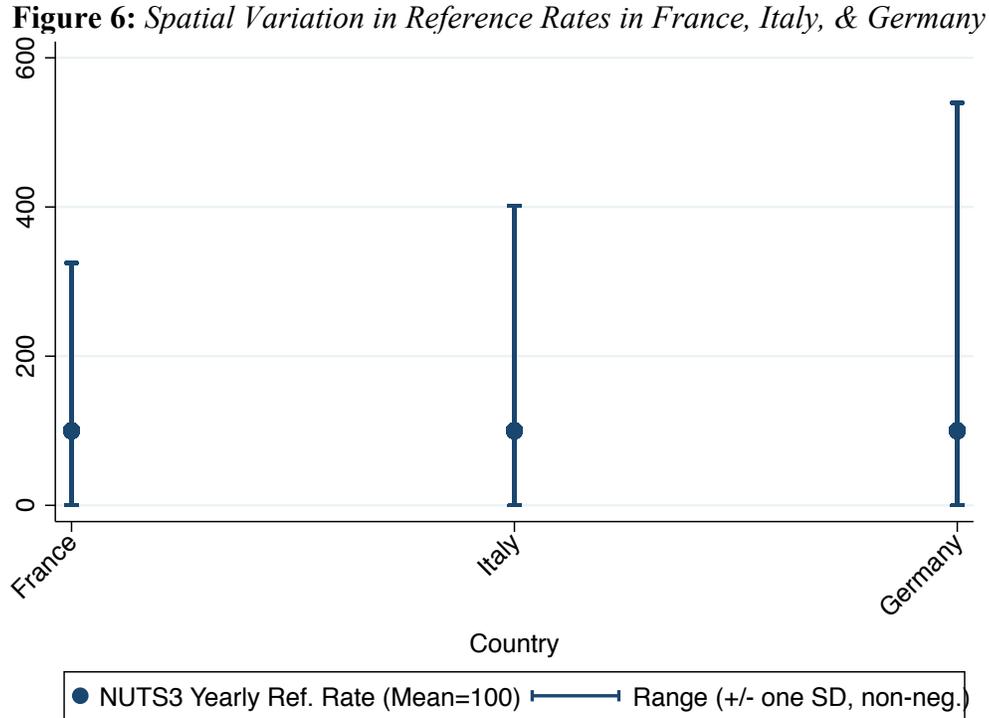
Note that the shifting preferences of high courts or national Parliaments with regards to the reference procedure is not unique to France. For example, the constitutional politics by the German Federal Constitutional Court and its uneasy relationship vis-à-vis the ECJ has been extensively documented by Alter (2001) and Davies (2012); and parallel analyses vis-à-vis the Italian Constitutional court have also been undertaken (Fontanelli and Martinico 2010). What does appear different across the three cases is the degree to which these volatile factors influenced year-to-year changes in the territorial diffusion and share of reference activity by territorially dispersed lower courts across the three cases.

H1b: State Judiciaries and Inter-Regional Variation in the Diffusion of EU Law Litigation

Our third hypothesis builds on the foregoing analysis by positing that whereas decentralized judiciaries should witness lower levels of inter-temporal variability in the spatial diffusion of the reference procedure, they should at the same time encourage greater inter-regional variation (H1b). The logic behind this hypothesis is that centralized organizations tend to promote institutional isomorphism and homogeneity of practice, whereas decentralized organizations permit more location-specific and heterogeneous practices.

An observable implication of H1b is that yearly subnational reference activity in Germany should be more variable across regions than in France, with Italy lying somewhere in between. We can assess this if we compare the standard deviations of the average number of yearly references per NUTS3 region across the three countries. However, to achieve a valid comparison, we need to take two things into account. First, our prediction may be artificially validated because the German judiciary disperses its supreme courts across its territory – in Berlin, Karlsruhe, Kassel, and Munich – whereas the Italian and French judiciaries concentrate their supreme courts in their respective capital cities. This might artificially inflate the inter-regional variation in reference activity in Germany. As a result, in our analysis, we only consider references submitted by courts of first instance and non-final appeal. Second, we must be careful to take into account country-level differences in baseline reference activity. To this end, we compute the average yearly reference rate for each NUTS3 region as a percentage of the country mean (which is set to 100). This allows us to compare the inter-NUTS3 variation relative to the

national mean across the three countries. To visualize the results, Figure 6 displays the size of the standard deviation relative to the mean reference rate for Italy, France, and Germany.



Note: The yearly NUTS3 reference rate for each country was computed by averaging the mean yearly references in each of their NUTS3 jurisdictions. Each country's mean reference rate was then standardized by dividing each NUTS3 region's rate by the country average, setting each country's average to 100.

Overall, Figure 6 supports H1b: Relative to its baseline level of reference activity, Germany has substantially greater variation in the number of yearly references originating from lower courts in its districts than does Italy for lower courts in its provinces or France for lower courts in its departments. Specifically, the standard deviation around the mean is 225% for France, 302% for Italy, and 439% for Germany. A one-sided independent samples F-test for equality of variances finds that the French standard deviation is significantly lower than the German standard deviation at the 99% confidence level (the F-test table is reported as Appendix A). Note that this finding is not driven by demographic pressures: Performing a parallel analysis for variation in population levels across NUTS3 jurisdictions in the three countries reveals very comparable levels of subnational population variability (see Appendix D).

V. The Spatial Clustering of Preliminary Reference Activity

H2a and H2b: Domestic Judiciaries and Issue-Specific Clustering of Reference Activity

The spatial perspective on the penetration of the EU legal order not only sheds light on patterns of dispersion across the territory of member states, but also on patterns of spatial clustering in what geographers call “hotspots.” Hotspots reflect a form of spatial autocorrelation in which locations where significantly higher values for the dependent variable (compared to the global mean) are clustered together. H2a posits that hotspots of preliminary reference activity focused on particular areas of law should emerge within member states. The underlying logic is that clusters of EU law litigation may emerge linked to a common exposure to local socioeconomic conditions (i.e. we might expect clusters of litigation relating to fisheries policy to emerge in major, coastal fishing communities and an absence of such litigation in landlocked areas) and that path-dependent processes involving local “knowledge spillovers” and other agglomeration effects may help to sustain them. Relatedly, our final hypothesis, H2b, adds that this form of issue-specific spatial clustering should be more pronounced in countries with decentralized judiciaries compared to those with centralized ones. The underlying logic follows directly from H1b: In states with decentralized judiciaries, the practice of EU law should be more responsive to local socioeconomic conditions, whereas states with centralized judiciaries should promote more standardized judicial practices regardless local socioeconomic conditions.

To assess this hypothesis, we focus on EU litigation in four of the most commonly litigated areas of EU law: (1) Agriculture-related, (2) competition, taxation, and freedom of establishment-related, (3) free movement of goods, services, and workers-related, and (4) social security and social provisions-related references. These non-mutually exclusive issue categories are based on the coding scheme used by Stone Sweet and Brunell (1998) in their path-breaking cross-national analysis of the reference procedure.²² We limit our analysis to courts of first instance and initial appeal, in order to avoid distortions associated with the location of high

²² We do not conduct parallel analyses for emerging or relatively dormant EU legal domains – such as references relating to the EU Charter of Fundamental Rights – because they generate litigation rates that are too low to assess spatial clustering with confidence.

courts that might artificially validate our claims regarding issue-specific spatial clustering.²³ Across the three countries, this yields a total of 684 references related to agriculture, 924 references related to competition, taxation, and freedom of establishment, 745 references related to the free movement of goods, services, and workers, and 343 references related to social security and social provisions.

To identify spatial clustering, we employ a leading tool for uncovering local spatial clustering: the Getis–Ord G_i^* (Getis and Ord 1992). The G_i^* 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’. For our analysis, the polygons comprise NUTS3 regions, the fixed distance band is computed by running a global spatial autocorrelation analysis (using the Global Moran’s I statistic) to identify the spatial distance at which clustering is maximized, and the dependent variable is the total number of references per NUTS3 region related to the four issue areas under analysis. Since NUTS3 regions differ somewhat in their size both within countries and between countries, this analysis may be affected by what geographers term the “modifiable areal unit problem” (Gleditsch and Weidmann 2012, 476) – or the fact that “as the [geographic] unit of analysis varies, so too will our results” (Soifer forthcoming). We thus replicate the analysis using a standardized polygon grid as a robustness check, without any notable change in the results (see Appendices E-G), attenuating concerns that the modifiable areal unit problem is biasing our inferences.

Figures 7 through 9 display the geospatial hotspot analysis results for France, Italy, and Germany. Overall, the results strongly support both H2a and H2b. First, in accord with H2a, the clustering of overall preliminary reference activity (the first map on the upper-left of each figure)

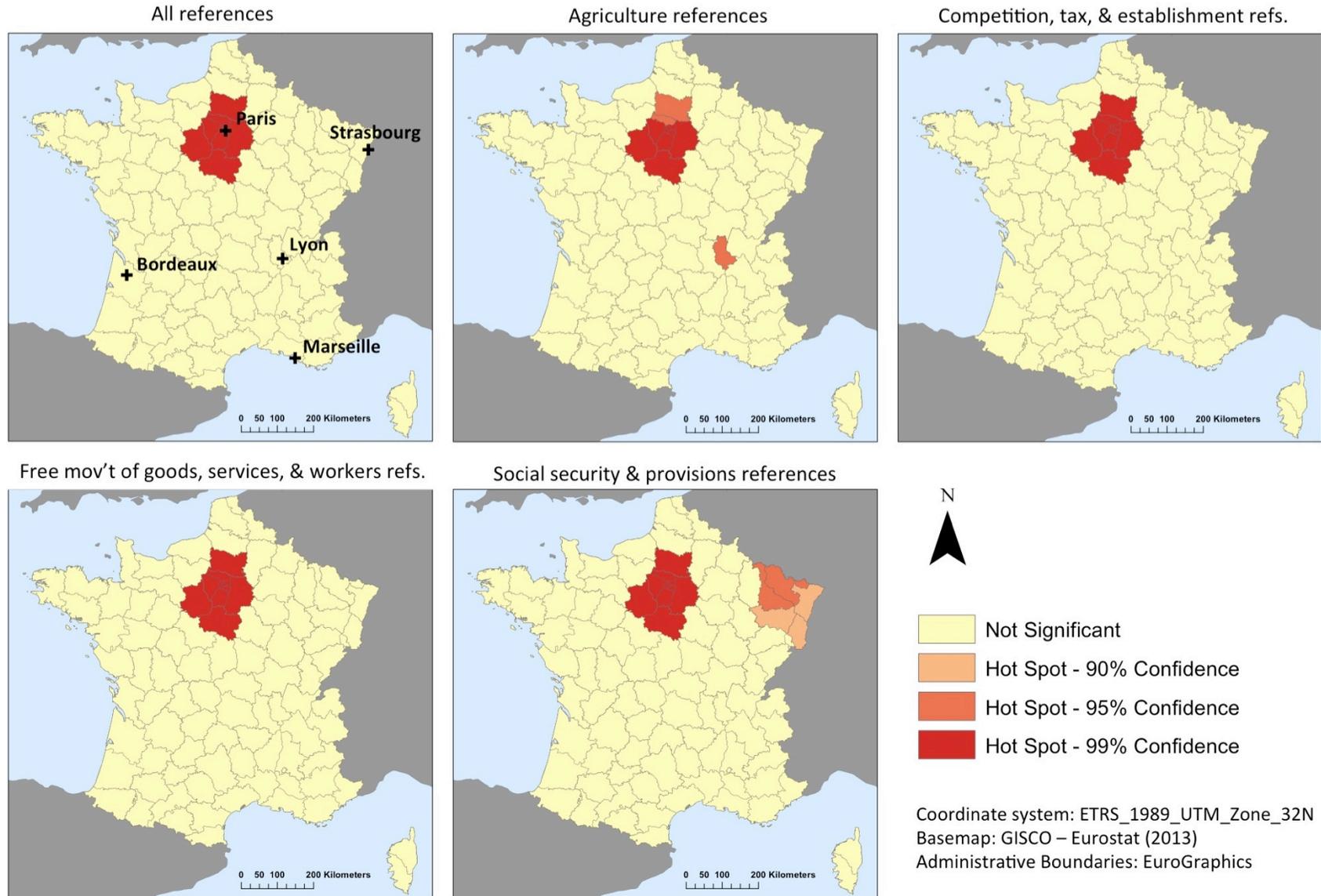
²³ We omit references from supreme courts of final appeal in this analysis, because of the distortions litigation before such courts could introduce to our hotspot analysis. For instance, German courts of final appeal have issue-specific competences – such as taxation disputes for the Bundesfinanzhof (Federal Finance Court), labor disputes for the Bundesarbeitsgericht (Federal Labor Court), and social security litigation for the Bundessozialgericht (Federal Social Court) – and are distributed in locations throughout Germany; our claims regarding spatial clustering might be artificially validated by litigation emerging from such courts.

masks issue-specific differences in the political geography of the reference procedure: In none of the three countries is the generic hotspot map for all references the same as all of the issue-specific hotspot maps: In France, agricultural and social security/provisions references are clustered in a slightly different spatial pattern compared to overall reference clustering; and in both Italy and Germany, the clustering patterns for all four issue areas differ to varying degrees from the generic hotspot map.

At the same time, it is clear that, as H2b would predict, the issue-specific differences in hotspot patterns in centralized France are very minimal compared to those in Italy and particularly in the highly decentralized Germany. Even when omitting all references from the Cour de Cassation, the Conseil d'Etat, and the Conseil Constitutionnel, reference activity across all issue areas is overwhelmingly concentrated in the greater Paris area, as Paris emerges as a statistically significant hotspot of agricultural (n=25), free movement (n=69), social (n=14), and competition (n=24) references with 99% confidence. This is particularly striking vis-à-vis free movement references: One would expect Marseille – the largest port in France and any Mediterranean country – to emerge as a hotspot for free movement references; Instead, courts in Marseille only referred a single case to the ECJ on the matter, and this activity remains predominantly clustered in the capital. These conclusions are bolstered when we compare the French results to those in Italy and (West) Germany.

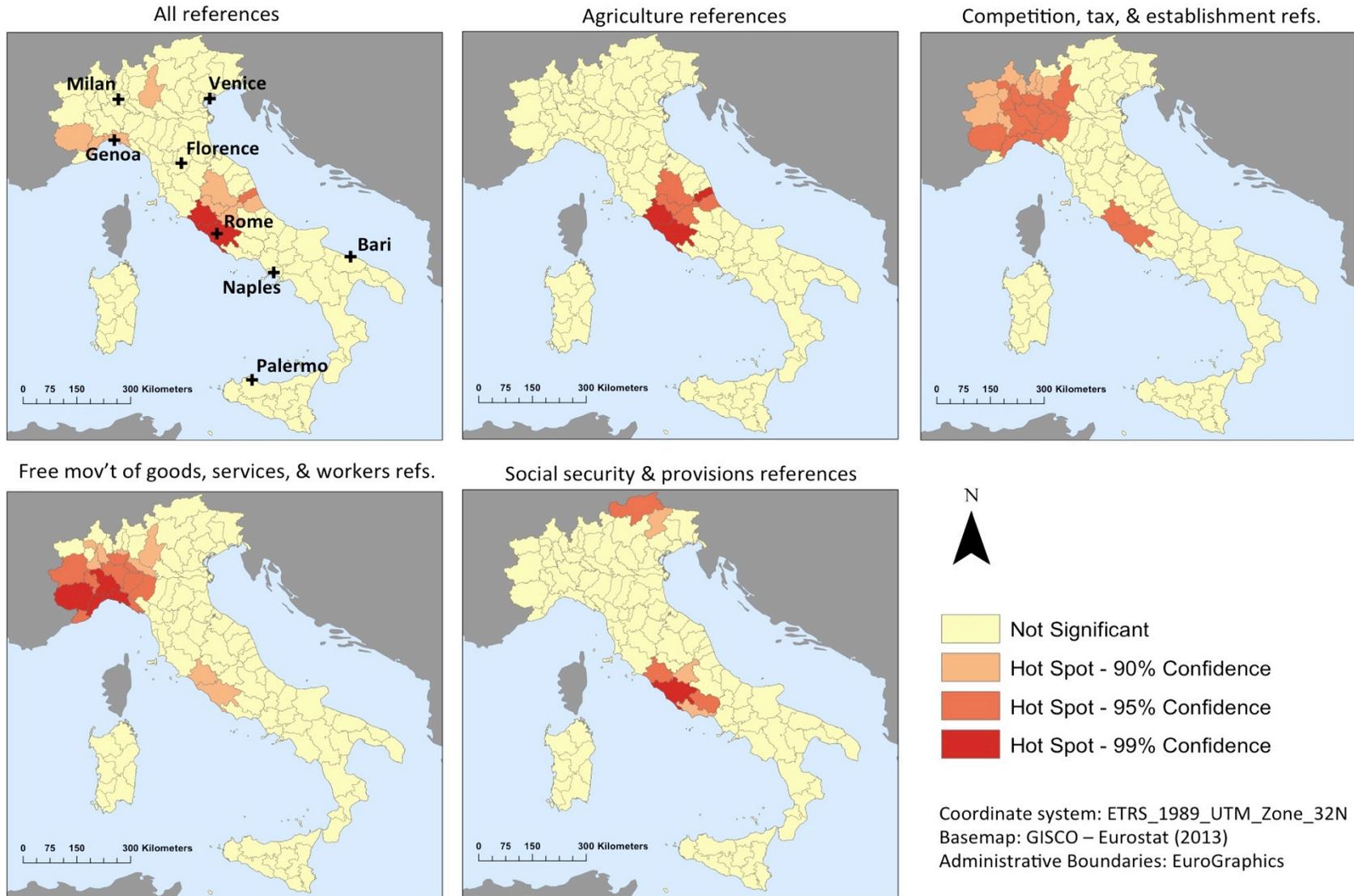
First, in Italy the capital city of Rome region is, not unlike its French counterpart, very active across all issue domains. However, two differences vis-à-vis the French case readily emerge. First, the degree to which greater Rome is a hotspot of reference activity varies somewhat across issue areas – ranging from 99% confidence for agriculture and social references to only 90% confidence for free movement references. Second, with the exception of agriculture references, Rome fails to emerge as the only hotspot of reference activity: For free movement and competition references, the industrial triangle of Turin, Milan, and Genoa are equally if not more significant a hotspot than is Rome. This is unsurprising, considering that Milan and Turin are the manufacturing hubs of Italy and that Genoa has long been the country's main port and one of the most active port cities in Mediterranean Europe. For competition-related references, Milan – which is the financial center of Italy – also lies at the center of a

Figure 7: Generic and Issue-Specific Hotspots of Reference Activity in France (NUTS3 level), 1964-2013



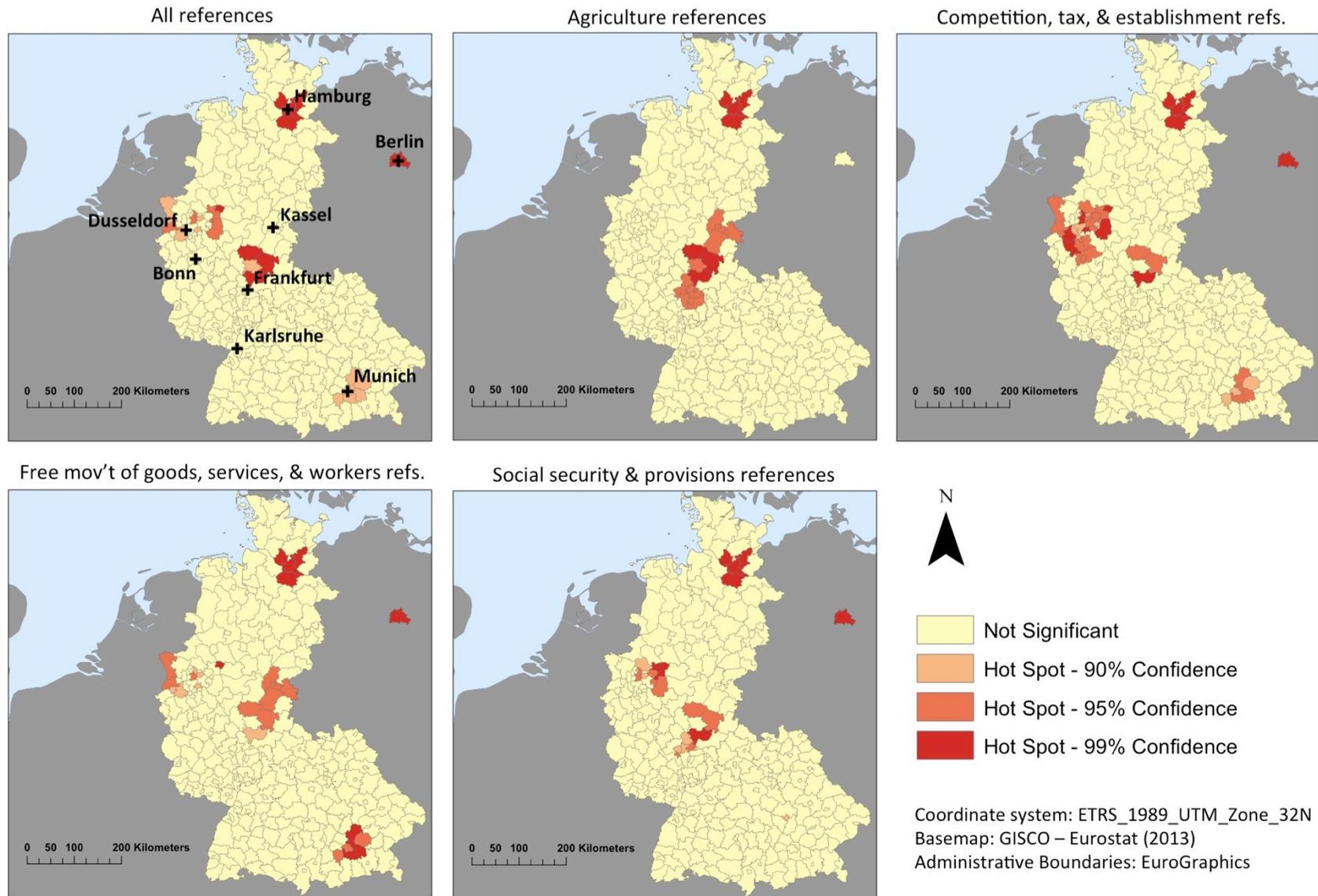
Note: Hotspots computed using the Getis-Ord G_i^* statistic.

Figure 8: *Generic and Issue-Specific Hotspots of Reference Activity in Italy (NUTS3 level), 1964-2013*



Note: Hotspots computed using the Getis-Ord G_i^* statistic.

Figure 9: *Generic and Issue-Specific Hotspots of Reference Activity in (West) Germany (NUTS3 level), 1964-2013*



Note: Hotspots computed using the Getis-Ord G_i^* statistic.

significant hotspot (n=62). And for social security and provisions references, activity from the Trentino-Alto Adige near the city of Bolzano emerges as a significant hotspot alongside that surrounding the capital, and the hotspot including Rome is shifted slightly southeastward, due to higher social reference activity from the poorer city of Naples (n=9).

Finally, issue-specific clustering in reference activity is most evident in Germany, where none of the issue-specific hotspot maps align exactly with the generic hotspot map, and where very distinct political geographies are present depending on which set of EU rules are being litigated. Most hotspots appear for some issue-areas and disappear when the litigation of other EU rules are considered. For example, for agricultural references it is primarily smaller towns in the state of Hessen – whose economy is significantly reliant on intensive agriculture – that emerge as the most intense hotspot (with 99% confidence) other than Hamburg. For competition-related references, it is North Rhine-Westphalia that is the most extensive and intense hotspot of reference activity. Here too, we see a responsiveness of reference activity to local socioeconomic context: North Rhine-Westphalia has long been the industrial core of the German economy, and it is currently home to 24 of the 50 largest German companies (European Commission 2016). Tellingly, Frankfurt – the financial hub of Germany – is also home to a hotspot of competition-based reference activity (n=34), as is Munich (n=31), which may signal that its *Bundespatentgericht* – the Federal Patent Court – is generating positive agglomeration effects in Munich’s lower courts. And for free movement references, it is unsurprising that Hamburg – the primary port of Germany – is a significant hotspot of reference activity (n=55), but notably the industrial core of North Rhine-Westphalia – whose economy originally centered on the production and shipping of coal and steel – is also speckled with significant hotspots, as is Munich (n=46), which is located within 100 miles of the Swiss, Austrian, and Czech borders.

It is not our objective in this paper to provide a fine-grained account of every hotspot revealed in Figures 7-9. Doing so would require further research based on a mixed-method design that brings to bear both fine-grained socioeconomic indicators at the local level and historical qualitative data to conduct some comparative case studies of various issue-specific hotspots, either within countries or across countries. The more modest aim we pursued above was to provide some plausible interpretations for our Getis–Ord G_i^* results, and to underscore that the litigation of EU law exhibits issue-specific spatial geographies conditioned by the organization of domestic judiciaries.

VI. Conclusion

By turning to a subnational and geo-spatial approach, this article is able to analyze the spread of EU law litigation across space and time in a way previous accounts could not. Our analysis of the spatial reach of the EU legal order sheds new light on the EU's ability to project its authority across the territory of its member states. Our analysis demonstrates that while the reach of the EU legal order has indeed spread spatially within member states over time due to the growing structural demand for EU law and the mobilizational role of institutional change agents, the pace and pattern of its penetration remains conditioned by enduring domestic institutions. Hence while EU legal development and the case law of the ECJ may often escape direct control by central state actors (Burley and Mattli 1993, Alter 1996, Stone Sweet 2000), this outcome, alongside the reach of EU law across space and time, continues to be shaped by the judicial organization of the state.

Specifically, our findings suggest that in more decentralized judicial orders, such as Germany's, there will be greater variation in rates of EU law litigation across regions and greater prevalence of issue-specific spatial clusters (hotspots) of litigation concerning particular areas of law, but a more incremental, bottom-up growth in the spatial coverage of EU law over time. By contrast, in more centralized judicial systems, such as France's, there will be greater temporal volatility in the spatial spread of preliminary reference activity (depending on whether central authorities send signals supporting or critiquing the EU legal system), but that there will be less spatial variation and tempered hotspots of litigation activity as centralized systems tend to encourage nation-wide homogeneity of legal practices at any given point in time.

These results yield new theoretical insights into the historical construction of supranational polities like the EU that operate as modern "law states" and also suggest new methodological approaches for its study. Theoretically, the results suggest that because the EU – despite being the most politically developed supranational order to date – must contend with the path-dependent influence of domestic judicial structures, EU legal integration faces a difficult tradeoff. On the one hand, layering EU rules atop unitary, centralized states with hierarchically streamlined judiciaries promotes homogenous judicial practices vis-à-vis use of the preliminary reference procedure. On the other hand, this layering process will be more susceptible to the shifting preferences of top-level state institutions, such as supreme courts and

the national parliaments that seek to influence them. This means that EU law might well be uniformly applied – which bolsters the infrastructural power and standardizes the subnational reach of the EU – but may also be susceptible to retrenchment or monopolization by domestic supreme courts jealous of their own authority or susceptible to inter-branch political struggles. The reverse holds for federal states with decentralized judiciaries. That is, although decentralization facilitates the bottom-up uptake in use of the preliminary reference procedure and insulates this process from the influence of supreme courts, it also mitigates the uniform enforcement of EU law via the reference procedure across space. This means that the infrastructural power of the EU legal order is more prone to being concentrated in hotspots of vigorous issue-specific reference activity, whereas other areas remain relatively insulated from Europe’s “juris touch” (Kelemen 2011: 1).

Finally, methodologically this article constitutes a significant advance in applying geospatial methods to the study of European law. We test our hypotheses concerning the spread of the EU legal order across space and time using an original geocoded dataset of preliminary references and a set of tools – Geographic Information Systems (GIS) and spatial statistics – that are novel in the study of European legal integration and still relatively rare in the field of socio-legal studies. We hope other scholars of the EU will build on this geospatial approach, perhaps using spatial regression techniques to explore other aspects of the spread of the EU legal order. Such a research agenda would bolster our understanding of the actual reach of EU law within EU member states, and would have implications for the study of other polities that, like the EU, govern primarily through law.

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Appendix

Appendix A: *One-sided independent samples F-test for equality of variances around the mean NUTS3 reference rates for France and Germany*

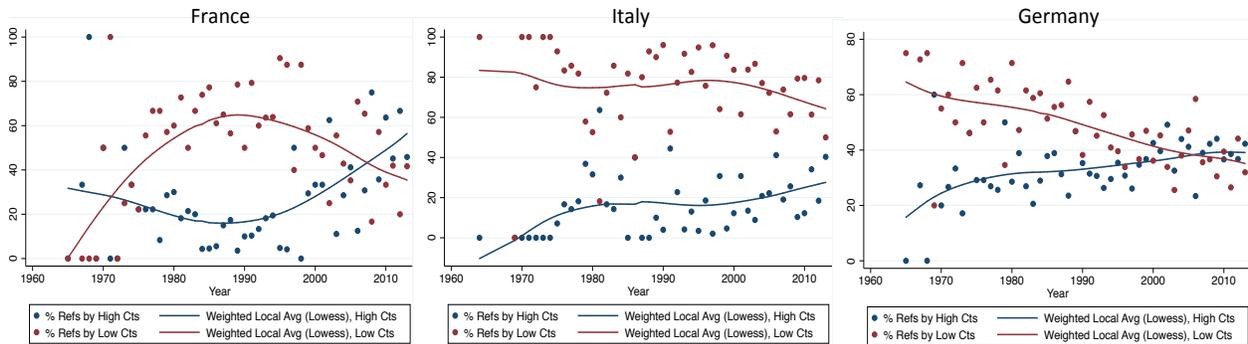
	N	Mean	Std. Error	Std. Deviation
France	96	100	22.97	225.02
Germany	325	100	24.38	439.59
f=0.2620, df=95, 424				
H(a): sd(France) / sd(Germany) < 1				
Pr(F<f) = 0.000				

Appendix B: *One-sided independent samples t-test (w/ unequal variances) for difference in mean % change in territorial coverage of the reference procedure for France and Germany*

	N	Mean	Std. Error	Std. Deviation
France	9	76.22	51.42	154.26
Germany	9	20.41	6.27	18.82
t=1.0774, Satterthwaite's df=8.23809				
H(a): mean(France) - mean(Germany) > 0				
(Pr(T>t) = 0.156				

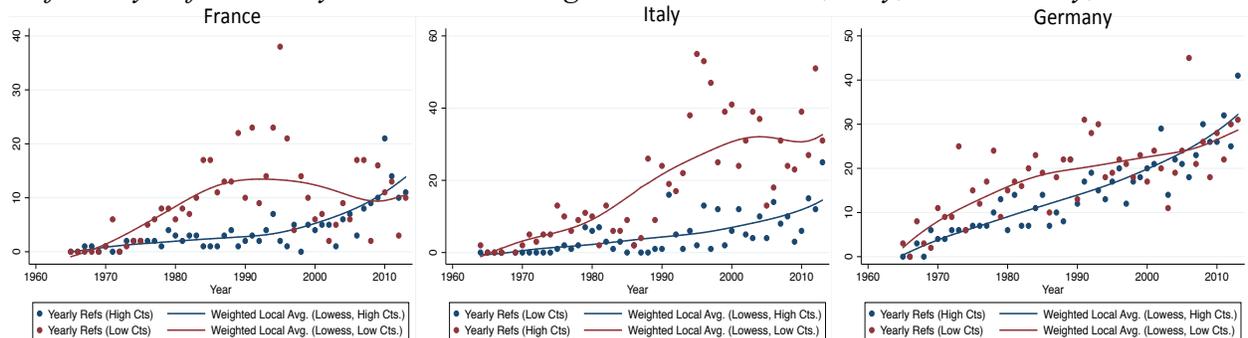
Appendix C:

Share of Yearly References by High and Low Courts in France, Italy, and Germany

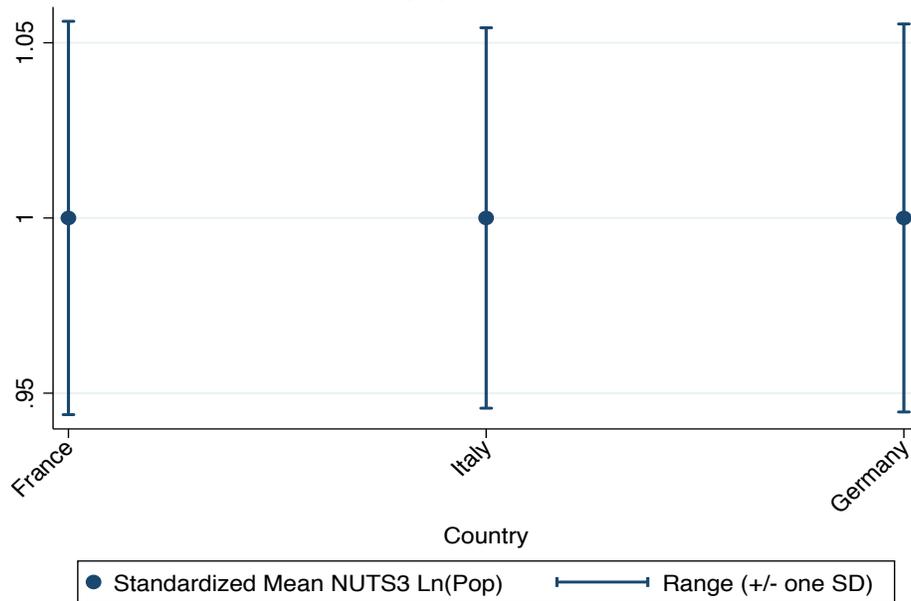


Note: Best-fit lines in this figure are Lowess curves based on a locally weighted regression of the percentage of yearly references on year to provide scatterplot smoothing.

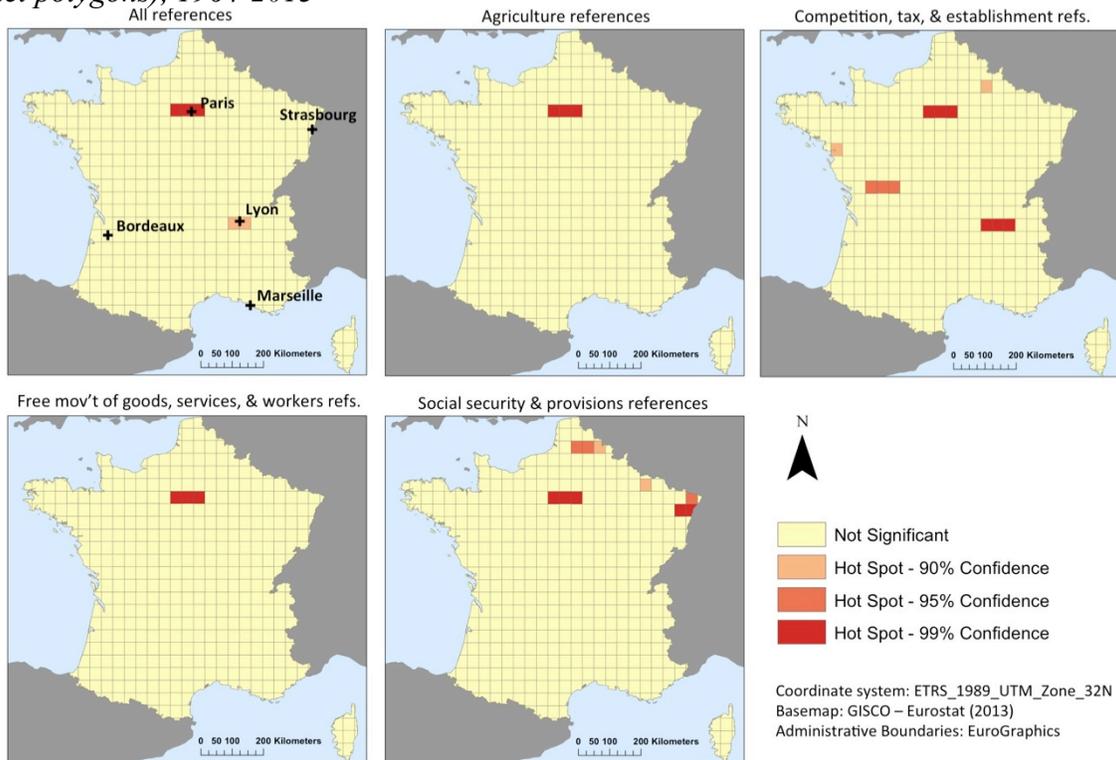
of Yearly References by Low Courts & High Courts in France, Italy, and Germany, 1964-2013



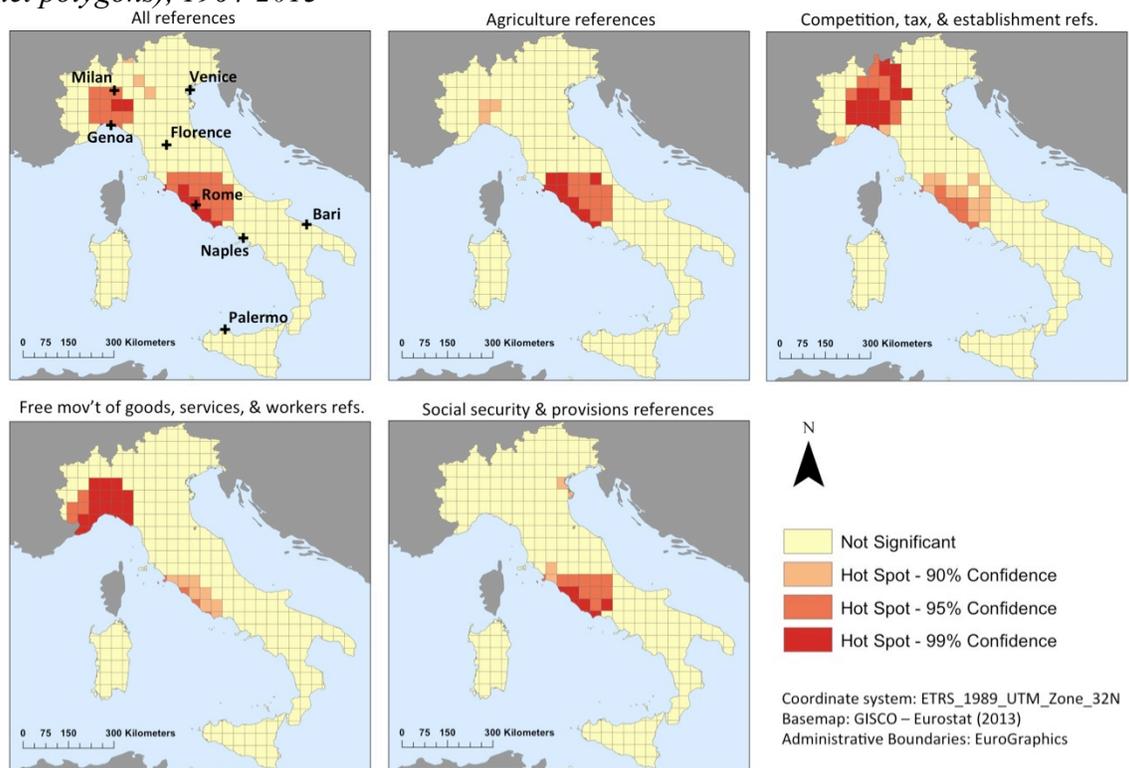
Appendix D: Variation in subnational population levels in Italy, France, and Germany



Appendix E: Generic and Issue-Specific Hotspots of Reference Activity in France (standardized fishnet polygons), 1964-2013



Appendix F: Generic and Issue-Specific Hotspots of Reference Activity in Italy (standardized fishnet polygons), 1964-2013



Appendix G: Generic and Issue-Specific Hotspots of Reference Activity in (West) Germany (standardized fishnet polygons), 1964-2013

