Keeping Up With Which Joneses: Spatial Diffusion of Rule of Law Through Economic International Organizations

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Keeping Up With Which Joneses: Spatial Diffusion of Rule of Law Through Economic International Organizations

Abstract
I develop a theory of spatial diffusion of the rule of law, where “space” is conceptualized as shared memberships in economic international organizations (IOs). I argue that the rule of law diffuses as a result of economic competition and socialization. Outside evaluators, such as international leaders, activists, and most importantly, international firms and investors, often assess states’ attractiveness as a business venue by comparing them to similar states. The natural reference group for such comparisons is not just geographical neighbors, but also states with shared memberships in economic IOs. Responding to this evaluation, states identify members of their own reference groups and view them as competition for investment. As a result, states within the same reference groups converge on issues related to lowering domestic economic risks, which are referred to by the umbrella term “domestic rule of law.” The resulting process of policy convergence is further aided by socialization. Socialization may involve emulation of policies of similar states or “active” learning through norm entrepreneurs, who use the reference groups for both evaluation and access to their target audiences. I capture the theorized spatial processes using a multiparametric spatiotemporal autoregressive model (m-STAR) and find support for the prediction.

Disciplines
International Relations | Other Statistics and Probability | Political Theory | Statistical Models

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Keeping Up With *Which* Joneses: Spatial Diffusion of Rule of Law through Economic International Organizations

Olga Chyzh*

May 20, 2014

Abstract

I develop a theory of spatial policy diffusion, where “space” is conceptualized as shared memberships in economic international organizations (IOs). I argue diffusion is driven by two complementary causal mechanisms: competition and socialization. Outside evaluators, such as international leaders, activists, and most importantly, international firms and investors, often assess states’ attractiveness as a business venue by comparing them to similar states. The natural reference group for such comparisons are not just geographical neighbors, but also states with shared memberships in economic IOs. Responding to this evaluation, states identify members of their own reference groups and view them as competition for investment. As a result, states within the same reference groups converge on issues related to lowering domestic economic risks, which are referred by the umbrella term “domestic rule of law.” Socialization operates through norm entrepreneurs, who use the reference groups for both evaluation and access to their target audiences. Economic IOs provide particularly useful channels for socialization by maintaining permanent headquarters or hosting regular meetings among members. Likewise, norm entrepreneurs tend to target states with similar levels of economic development. I capture the theorized spatial processes using a multi-parametric spatio-temporal autoregressive model (m-STAR) and find support for the predictions.

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Introduction

Ukraine’s pro-Moscow President Yanukovich’s abrupt withdrawal from the negotiations for an economic Association Treaty with the European Union in the fall of 2013 set off a chain of the most violent and bloody events in history of the former Soviet country since WWII. In the wake of massive protests culminating in Yanukovich’s ouster, Russia undertook several actions—occupying the Crimean peninsula, amassing troops on the border, and orchestrating civil violence—to prevent the strengthening of economic ties between Ukraine and the EU, and instead push Ukraine towards joining its Eurasian currency union. Yet neither the brutal repression of protesters nor Russian aggression could deter the pro-EU protesters and activists, for whom a closer relationship with the EU meant hope for legal reform, economic opportunities, and an end to rampant corruption.

How justified were these hopes? Do memberships in economic international organizations (IOs) have an effect on domestic economic conditions and to what extent? To answer this question, this paper provides a theoretical and empirical evaluation of the relationship between memberships in economic IOs and domestic rule of law.

This paper contributes to the study of policy diffusion by zeroing in on its one particular non-geographical channel—shared membership in economic IOs—and exploring its effects. I argue that shared membership in economic IOs is especially relevant for the diffusion of rule of law, which is defined as domestic level of property protections, banking and insurance laws, and contractual enforcement (Souva, Smith and Rowan 2008). Building on the existing spatial diffusion theories, I argue that membership in economic IOs serves as an important channels for policy diffusion, often even more important than geographical proximity. IOs create favorable settings for the operation of the two policy diffusion mechanisms—competition and socialization. States with shared IO memberships exhibit convergence in their domestic levels of rule of law as a result of these two processes. First, states work to “keep up” with their fellow IO members to remain competitive for trade, investment, and other international benefits. Second, IOs act as “teachers” of rule of law,

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1 The Russian-led Eurasian Economic Union, set to officially be implemented in 2015, consists of Russia, Belarus, and Kazakhstan, with Armenia, Kyrgyzstan, and Tajikistan as other possible members.

2 Corporate raiding, or seizure of foreign and domestic firms (based on technical or fabricated charges) with the intent of subsequently awarding them to plaintiffs or government officials, are endemic within Ukraine and have been called a “cancerous tumor on the economy” by Yanukovich, though such actions often take place with the tacit or even explicit cooperation of regional and national officials (Associated Press 2012). Moreover, in 2013, the US Trade Representative labeled Ukraine a “Priority Foreign Country”—the lowest category for US intellectual property right protections—a distinction that had not been issued in 11 years (BBC News 2013).

3 Coercion may also serve as a mechanism for policy diffusion; however, I argue below that this mechanism is beyond the scope of this study, due to the structure of the available data.
either as their main mission or by creating favorable fora and access for policy entrepreneurs.\footnote{Some scholars separate socialization into learning, emulation, and social contagion. While important, this distinction is not theoretically crucial for the purposes of this paper. As a result, I use the word “socialization” as an umbrella term for the three processes, and when necessary, refer to each of the processes individually.}

It is noteworthy that, while all of these processes may take place among geographically proximate states, an important distinction between IO-led and geographically-driven policy diffusion lies in the intent. While geographical location is acquired by fiat, IO memberships are carefully and strategically chosen and negotiated. This suggests, although certainly does not guarantee, that states may be more susceptible to IO-led policy diffusion than to that which is merely driven by their position on the map. The opening example of Ukraine provides some anecdotal support of the importance of IO membership for a country’s domestic economic climate: Ukraine, a European country with close historical ties to Eastern neighbors, hopes to remedy its poor legal and economic conditions by forging closer ties with the EU rather than remaining within the Russian sphere by joining the Eurasian Economic Union.

I conduct a systematic test of the research hypothesis on data that combines state memberships in economic IOs (Boehmer, Gartzke and Nordstrom 2004) and domestic level of rule of law. I measure and isolate the effect of shared memberships in economic IOs from that of geography using a spatial lags model, by taking advantage of recent advances in spatial econometrics (Beck, Gleditsch and Beardsley 2006; Franzese and Hays 2007, 2008; Hays, Kachi and Franzese 2010). The dependent variable—state’s domestic level of rule of law enforcement—is operationalized and measured in two alternative ways. First, I operationalize rule of law in terms of judicial independence and employ a measure developed by Linzer and Staton (2012) (L&S). L&S rule of law measure is produced by applying Bayesian factor analysis to a number of existing measures of rule of law and judicial independence, such as Henisz (2000), CIRI (Cingranelli and Richards 2010), and Tate and Keith (2007). Such an approach allows for addressing the challenges, associated with measuring rule of law, such as temporal dependence, boundedness in the latent quantity, substantial missingness, and measurement error in the observable indicators (Linzer and Staton 2012; Ríos-Figueroa and Staton 2012). I also operationalize rule of law using Standard and Poor (S&P) credit ratings, which is a common measure of country creditworthiness, used by international investors and economic institutions. Although S&P ratings are only available for a subset of the data, using this measure serves as a robustness check for the main results.

The results corroborate the research hypotheses. Specifically, when evaluated in isolation from each other, both geographical proximity and shared membership in economic IOs have a statisti-
cally significant effect on policy diffusion. Evaluating the two mechanisms within a single empirical model, however, reveals that accounting for shared memberships in economic IOs weakens or altogether negates the effect of geographical proximity. I conclude that economic IOs serve as a more salient reference group for policy diffusion than that created by mere geographical proximity. When formulating domestic policies, states do not simply imitate those of their geographical neighbors, but the neighbors with whom they share memberships in economic IOs. Present-day Poland, for example, is more likely to “borrow” policy insights from its fellow members of the European Union, such as Germany or Spain, than from Ukraine or Russia. Despite the shared borders, cultural ties, and significant trade flows with the latter, Poland is much closer to its fellow EU members, when it comes to policy goals. The analysis of substantive effects further clarifies the results.

The paper proceeds in the following way. I start by summarizing the existing literature on the two complementary mechanisms for policy diffusion—competition and socialization. While these mechanisms are most frequently discussed in the context of geographical diffusion, I demonstrate that economic IOs provide a more pertinent channel for diffusion of rule of law. Next, I describe the research design and test the research hypotheses using a multi-parametric spatio-temporal autoregressive model (m-STAR). Consistent with the theory, I find that both shared memberships in economic IOs and geographical proximity stimulate policy diffusion, albeit the former’s effect is stronger and more robust to empirical specifications. I supplement the primary analyses with graphs of substantive effects. Finally, I conclude by discussing the implications of these results.

Spatial Diffusion

Temporal and spatial clustering of political outcomes has long drawn scholarly attention. The “waves” of democratization, Colored Revolutions in the post-Soviet space, and most recently, the Arab Spring all hint at a possibility for international “spillover” or “contagion” of domestic-level outcomes.\(^5\) Inspired by these empirical observations, international relations (IR) scholars have produced an impressive body of research on spatial policy diffusion.

Much of the existing diffusion literature focuses on geographical or regional diffusion (e.g., Colaresi and Thompson 2003; Gleditsch and Ward 2006; Linos 2011; Simmons 2000). More recently,

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\(^5\)More precisely, diffusion is one of the three possible explanations for spatial and temporal outcome clustering. The other two—common exposure, or similar unit-level response to the same external stimulus, and homophily, or similar units self-selecting into similar outcomes (Hays, Kachi and Franzese 2010)—are beyond the immediate theoretical scope of this paper. This paper’s modeling strategy for controlling for these competing explanatory factors is discussed in Research Design.
there has also been a growing interest in non-geographical spatial connectivity, which brought into the spotlight such alternative channels of diffusion as shared IO memberships, economic ties, political similarity, or shared historical and cultural ties (e.g., Cao 2009, 2010; Eichengreen and Leblang 2008; Hays, Kachi and Franzese 2010; Pevehouse 2005; Torfason and Ingram 2010; Berndt and Woods 2013a, b; Zhukov and Stewart 2013).

Drawing on the broader policy diffusion literature in the study of American politics (Berry and Berry 1990; Boehmke and Witmer 2004; Pacheco 2012; Volden 2006; Walker 1969), IR scholars identify three causal mechanisms of diffusion: coercion, competition, and socialization (Elkins and Simmons 2004; Simmons, Dobbin and Garrett 2006, 2007). Coercion theories attribute diffusion to the purposive efforts of major international players (such as major powers, IOs, or nongovernmental actors), who typically rely on such tools as economic conditionality (e.g., specific conditions that states have to meet in order to join the IO) or even military interventions (Levitsky and Way 2005; Pevehouse 2002a, b, 2005). EU membership conditionality, as it related to minority treatment in Slovakia and Romania, is an example of the former effect (Kelley 2004). An example of an attempt at coercive diffusion of democratic institutions is the establishment of the United Nations Assistance Mission for Iraq (UNAMI) following the US intervention in 2003.

Testing coercion theories, however, is beyond the scope of this paper, as such theories posit conditional relationships that promise IO membership in exchange for democratization. While such relationships are certainly possible, testing them is complicated by the need to identify the relevant sample of states—states that are interested in adjusting their current behavior in order to join an IO (Pevehouse 2005). In the absence of this type of data for a large-N study, the theoretical and empirical scope of this paper is limited to the remaining two diffusion mechanisms—competition and socialization.

**Diffusion through Competition**

Competition is one of the key causal mechanisms behind diffusion of norms, rules, behaviors, and practices (Cao 2010; Simmons 2000; Simmons, Dobbin and Garrett 2006, 2007; Swank 2006). The general argument is that firms and investors have a choice of where to take their business and, all else equal, prefer low risk markets (Li 2006; Porta et al. 1997; Ramcharran 1999; Simmons 2000; Sobel 2002; Wei 2000). Aware of this preference, states compete for the benefits associated with attracting international business by adopting one of two strategies: (1) enacting policies that mediate economic risks, such as stronger property rights protections or improvement in democratic practices (Simmons
or (2) providing additional business incentives that would “make up” for the losses associated with higher investment risks, such as lower capital taxation rates (Cao 2010; Li 2006). Both strategies suggest a certain degree of policy convergence among competing states. Importantly, however, in this competition for international business and investment, not every state is or views itself in direct competition with every other state. Operating in very different domestic and international environments, states are unwilling and often unable to emulate certain policy outcomes. Different policies work for different states: in the research on policy adoption in American states, scholars have found that rather than comparing their state to the states that are leaders in policy innovation, such as New York and California, or even to the national average, legislators tend to look for cues in similar states—within the same geographical region, similar socio-demographic characteristics, or even similar budgets (Volden 2006). California, for example, is more likely to compare itself to New York or other large and diverse East coast states than more geographically proximate Oregon or Nevada.

IR scholars identify similar patterns in behavior of international states. Policies diffuse as a result of states’ attempts to win a prize, which could include various economic and political benefits, such as attracting international business and investment, foreign aid, or memberships in lucrative international agreements. Rather than global, this competition takes place among states that fall within the same group of reference. The competition’s prize defines both the memberships of these reference groups as well as the particular policies likely to diffuse.

Competition for international economic benefits, such as foreign direct investment (FDI) leads to states’ convergence on policies related to the legal protections of commerce. Simmons (2000), for example, argues that competition for FDI leads to convergence in states’ compliance with with Article IIX of the International Monetary Fund’s (IMF) related to processing international bills of payments. While a state’s reliability in processing of the international bills of payments is certainly an important consideration, investors also look for other guarantees and protections, such as freedom from government expropriations, seizures of assets, contract repudiation, and corruption (Li and Resnick 2003). Referring to the domestic predatory practices as the level of domestic rule of law, I argue that competition for international trade and investment leads to convergence in the rule of law among the states that view each other as competitors.

As mentioned earlier, the set of competitors or the reference group is also defined by the competition’s prize. Identifying the relevant groups of states that should exhibit convergence in the levels of rule of law, then, requires exploring the logic behind the allocation of FDI. International
investors recognize and take advantage of the risk/return ratios and their variation among the investment markets (e.g., Aizenman 2003; Jensen 2008). Some choose to diversify their investment portfolios, while others specialize in particular types of investments. For instance, multinational corporations (MNCs), operating within high production costs industries tend to forgo potentially higher returns for greater market stability, while lower production costs may draw MNCs into more risky environments (Aizenman 2003). Markets, characterized by high risk and high return, in other words, are not in direct competition with low risk low return markets.

A quick and easy way to group international states in terms of expected risks and returns is based on geographical proximity or regional memberships (Simmons 2000). As a rule, regional memberships stands as a great proxy for similar economic, political and cultural development, as well as factor endowments—all known determinants of investment risks and returns. A closer look, however, reveals that, just like any proxy measure, geographical proximity performs relatively well in clearcut cases, yet fails in a large number of theoretically interesting borderline cases. The geographical approach alone struggles, for example, with separating the medium and low risk Central and Eastern European markets, such as Poland, Hungary, Latvia, Lithuania, and Estonia, from high risk countries, like Belarus, Moldova, and Ukraine. Moreover, a failure to consider factors beyond geography would miss crucial changes in investment climates, such as the fall of the Soviet Union, or accession to the EU, NAFTA, or other economic organizations. At the time of the fall of the Soviet Union in 1990s, for example, investment opportunities in Poland compared to Ukraine looked much different than in the early 2000s. Poland, whose economy was crumbling compared to that of Ukraine during the late years of the Soviet Union, had experienced fast-paced economic growth, transforming in a low risk investment state, a status further solidified by its accession to the EU.

In sum, while regional geographic membership presents the most obvious reference group for states to look to for policy cues, observation suggest that states with shared economic IO memberships may constitute an equally, if not more important reference. Further evidence comes from the frequent use of fellow economic IO members as a reference of comparison by government officials, daily news, and reports by various inter- and non-governemental organizations. Ukraine’s economic or democratic performance, for example, is often assessed in the context of comparing it to Georgia, Kazakhstan, or other members of the Commonwealth of Independent States (CIS), (Business Monitor International 2012; Caucasus Business Forecast Report 2012; Irkliyenko 2012). Likewise, prospective investors and business partners often compare Venezuela to other Oil Producing and
Exporting Countries (OPEC) states, such as Kuwait and Nigeria, rather than to its contiguous neighbors (Calgary Herald 2008; Montinola and Jackman 2002).

By creating such reference groups for outside evaluators and, more importantly, for international businesses and domestic political leaders, IOs bring what may otherwise be geographically distant states into closer interaction and competition with one another, while at the same time increasing the distance between the members and non-members. Member-states, however, do not start on an even playing field when competing for the benefits associated with attracting international business. In other words, states that end up within the same reference group due to their shared IO membership may vary greatly in their attractiveness as trade partners or investment opportunities. Since firms and investors are free to choose their business partners, less competitive member-states (e.g., those with weaker property rights protection) run the risk of being passed up in favor of the more attractive business opportunities.

Moreover, this competition within reference groups is not just implicit. Instead, the causal process is well known to policy-entrepreneurs, who, in turn, explain the incentive structures to legislators. Interviews with US lobbyists, for example, show evidence of frequent referencing of policies within comparable states as an important strategy of policy-promotion (Volden 2006, 298). Similar processes can be traced within international state policy-making. Russia’s Prime Minister Dmitriy Medvedev, for example, used the reference mechanism by comparing Russia to other CIS states, when justifying the decision to raise the limit for the cover for deposits insured by the Russia’s Deposit Insurance Agency:

[... B]earing in mind the criterion for the correlation between per capita gross domestic product and the volume of insurance cover for deposits, in our country indicators have been lower than in many CIS states, including Kazakhstan and Ukraine, for instance (Butrin, Mikhaylin and Cherkasov 2012, p. 9, emphasis added).

Similarly, in an address to domestic investors, Romanian Prime Minister Mihai-Razvan Ungureanu invoked two of such reference groups, by encouraging them to invest not just in the EU, but also the CIS:

There is need for Romanian economic presence, for direct Romanian investment in other states, which are not necessarily EU members, starting with the Republic of Moldova, Ukraine, the Russian Federation - in fact the overall CIS [..] (BBC Monitoring Europe 2012, emphasis added).

In sum, by grouping states in accordance with their economic IO memberships in this way,
governments, investors, and observers create reference groups. States within these reference groups view themselves in direct competition for investment or other economic benefits, which leads to them mimicking one another’s political and economic reforms. As a result of this process, after some time states with shared IO memberships exhibit policy convergence, such as similar levels of rule of law enforcement. This logic leads to the following research hypothesis:

**Research Hypothesis:** A state’s level of rule of law is positively affected by the average rule of law of its fellow members in economic IOs.

### Diffusion through Socialization

Socialization theory posits an alternative, yet complementary, causal mechanism for policy diffusion—a mechanism that emphasizes the process of social learning (Elkins and Simmons 2004; Finnemore 1993; Simmons, Dobbin and Garrett 2006). The key distinct feature of socialization—defined as “a change in beliefs” as a result of “exposure to new evidence, theories, or behavior repertoires” (Simmons, Dobbin and Garrett 2006, 795)—is that, in contrast to the competition mechanism, actors’ behavior is affected by others’ not because it alters their payoffs structure, but because it provides information about available policy options (Simmons, Dobbin and Garrett 2006). While these policy options may or may not yield higher expected utility, what is important is that these options become available either through passive interaction with others or as a result of active effort of norm entrepreneurs.

Scholars sometimes distinguish between the processes of passive learning and active or channeled learning (Elkins and Simmons 2004). Passive learning implies the process in which governments adopt new policies as new policy options become available, e.g., as they are made aware of new policy options as a result of observing policy processes in similar states (Elkins and Simmons 2004, 175-176). Within the democratization literature, the causal process associated with passive learning is sometimes referred to as “demonstration effects.” The argument is that regimes become more likely to democratize as their citizens get exposed to the images of “the good life” in democratic states (Beissinger 2007; Mitchell 2002; Rawls 1999) or inspired by revolutionary experiences in other states (Mitchell and Harrison 2012).

Channeled learning refers to policy learning in response to the efforts of norm entrepreneurs or individuals or groups who actively promote the norm by providing training, information, and

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6 For a similar argument regarding diffusion of economic policies, see Cao (2009), Franzese and Hays (2008), Park (2010), and Plümper, Troeger and Winner (2009).
resources (Finnemore and Sikkink 1998). According to this argument, for example, democracy diffusion occurs when pro-democracy activists within autocracies are able to form and maintain strong links to sympathetic groups within democratic states (e.g., exile clusters, churches, human rights organizations) (Bell, Clay and Murdie 2012; Checkel 1997; Greenhill 2010; Rosenau 2003). These outside supporters promote democracy by lobbying their own governments to pressure the autocratic regimes, as well as by providing the pro-democracy movements with economic resources, information, training, and other types of support (Whitehead 1991, 1996).

Although promotion of democracy is not equivalent to the promotion of rule of law, there is certain overlap between these two concepts. Many aspects of rule of law, such as property protections and contractual enforcement, are inseparable from the modern conceptualization of democracy, which emphasizes legal protections for minorities and individuals more generally. Promotion of democracy, therefore, comes hand in hand with the promotion of the rule of law.

A necessary feature of socialization is that this process requires that the targets of diffusion be embedded in social networks which would transmit the relevant information among them. In other words, the effectiveness of international policy entrepreneurs is constrained by their ability to access to the pro-democracy groups within authoritarian regimes. For obvious logistical reasons, for example, external actors have the greatest impact when they are located in a democratic state that borders the targeted autocracy (Bell, Clay and Murdie 2012; Gleditsch and Ward 2006; Levitsky and Way 2005).

Shared IO membership also facilitates such access. By maintaining permanent headquarters staffed with member representatives, or hosting regular international meetings among their members, IOs provide one of the easiest and safest channels through which policy entrepreneurs can access their target audiences—elites from corrupt authoritarian states. US criticism of Russia’s presidential elections at the 2011 summit of the Organization of European Cooperation and Development, for example, has been credited with triggering major anti-government protests in Russia (McLaughlin 2012). Similarly, the Arab League took the lead in the negotiating with the Al-Asad regime to allow international human rights observers into the protest-engulfed Syria (BBC Monitoring Middle East 2011).

Pro-democracy protests are also commonplace outside of major IO headquarters, such as the New York office of the United Nations (Spencer and Miles 2008), and there is little doubt about other less vocal and perhaps more effective interactions between pro-democracy entrepreneurs and member representatives. The World Economic Forum in Davos, for example, explicitly facilitates such
interactions between government representatives from around the globe and social activists and business leaders.

In addition, economic IOs themselves may take on the role of norm entrepreneurs with the goal of promoting legal reform (Barnett and Finnemore 1999). More specifically, IO officials often view the role of spreading norms as part of their mission. Many IOs, such as the World Bank and the IMF, are rather explicit about this perceived role, especially as it comes to transmitting the norms associated with the behavior of advanced market economies (Wade 1996), although diffusion of political norms and principles became more explicitly emphasized with the end of the Cold War (Barnett and Finnemore 1999; Perry 1996).

IOs have several tools that can be used to further the goal of policy promotion, such as creating and/or sponsoring foreign exchange programs that educate elite students from corrupt authoritarian countries at educational institutions in countries with strong rule of law (Perry 1996; Pevehouse 2005). In addition to providing the participants with rigorous education which enhances their chance at obtaining important leadership positions in their country’s government, such programs expose these future elites to the central principles of functioning market economies and democratic governance. Hosting international conferences, workshops, sponsoring teacher exchanges, and other forms of joint training between democratic and authoritarian countries constitute similar mechanisms for diffusing democratic norms and values available to IOs. Other tools that may be used by IOs to promote domestic reform are shaming or provision of material incentives, including suspending membership (Donno 2010, 2012; Hathaway and Shapiro 2011; Kelley 2004; Murdie and Davis 2012; Pevehouse 2005). Finally, IOs certainly play a passive role in spreading rule of law by simply providing avenues for member interaction, exchange of information and ideas—a process also known as “social contagion” (Wendt 1999).

Practically, separating the causal effects of passive social contagion from those of rival theories, such as competition or channeled social diffusion is virtually impossible short of engaging in case specific process tracing (Kelley 2004). This is not problematic for the purposes of this paper, however, as both types of socialization act as complements to competition, fortifying the effect posited in the research hypothesis: economic IOs provide channels of rule of law diffusion among their member-states. In the next section, I will describe the research design aimed at testing the research hypothesis, while controlling for a number of alternative explanations, such as geographical diffusion, self-selection, and the known international and domestic factors associated with the rule of law.
Research Design

I evaluate the research hypothesis, using a multi-parametric spatio-temporal least squares regression (m-STAR). M-STAR treats state’s overlapping memberships in economic IOs, as well as geographic contiguity—the main competing hypothesis—as spatial lags (Franzese and Hays 2007, 2008; Hays, Kachi and Franzese 2010). This model provides for an adequate testing of diffusion hypotheses, from both a methodological and a theoretical perspective. In contrast to other methodological techniques that treat spatial and temporal dependence as a nuisance (e.g. fixed effects), m-STAR permits explicit modeling and estimation of contemporaneous spatial effects, while also accounting for the traditional unit-level effects (e.g., GDP per capita). The equation for the democracy diffusion through IOs model posited in this paper can be written out as:

\[ y_i = \sum_{j} \rho_1 w^1_{ij} y_j + \sum_{j} \rho_2 w^2_{ij} y_j + \ldots + \sum_{j} \rho_R w^R_{ij} y_j + \phi y_{i,t-1} + \sum_{k} x^k \beta_k + \epsilon_i, \]  

(1)

where \( y_i \) is the dependent variable, and \( w_{ij} \) are spatial-level covariates, such as different types of shared IO membership or contiguity, and \( \rho \) are the corresponding spatial weight coefficient to estimate.\(^7\) Note that for each observation, \( y_i \), a spatial lag \( w_{ij} y_i \) is simply a weighted sum of the dependent variable’s values in all units \( y_j \) other than \( i \)—a straightforward way to capture state \( i \)’s dependence on outcomes in other states. Temporal dependence is captured by including a standard temporal lag \( y_{i,t-1} \), with \( \phi \) as its coefficient. Finally, the model includes a set of traditional unit-level covariates \( x \) with coefficients \( \beta \), that enter as control variables, and the error term \( \epsilon_i \).

Dependent Variable

The dependent variable—state \( i \)’s domestic level of rule of law—is measured in two alternative ways: (1) using the L&S measure of rule of law, and (2) S&P ratings of countries’ international creditworthiness. L&S use a Bayesian factor analysis model to construct a latent rule of law measure, that synthesizes information from several existing datasets, such as Henisz (2000), CIRI by Cingranelli and Richards (2010), and Tate and Keith (2007). This measurement approach remedies several known problems, associated with measuring rule of law, such as temporal dependence, boundedness, substantial missingness, and measurement error (Linzer and Staton 2012; Ríos-Figueroa and Staton

\(^7\)That is, if \( w^1_{ij} \) represents the spatial weight for High Capacity IOs, then \( w^1_{ij} \) is an NxN matrix whose \( ij^{th} \) cell entry is the number of shared high capacity IO memberships between \( i \) and \( j \), and \( \rho_1 \) is the spatial effect coefficient to estimate.
2012). The intuition behind such a measurement strategy is to “average out” the differences among the existing rule of law measures, while also reporting a measure of variance, which captures uncertainty or lack of inter-coder reliability. The resulting measure is a ratio ranging from 0 to 1, with higher numbers associated with stronger rule of law level. The measure spans 200 states between 1960-2009 (Linzer and Staton 2012).

I also measure the dependent variable using S&P international credit ratings (Standard and Poor’s Ratings Services 2013). S&P Ratings Services is a leading provider of credit ratings, as well as other types of data, research, and risk analysis to international banks, investors, researchers, and policy practitioners. S&P credit ratings measure ranges from 0 to 1, with higher numbers indicating stronger rule of law, and covers 63 countries between 1986-2001. Although limited in coverage, S&P measure provides a robustness check, as well as a “reality check” of the results against the picture seen by real-world practitioners.

Both measures of the dependent variable are first differenced and multiplied by 100, producing scores with a potential range between 0 and 100. Taking a first difference simply involves a subtraction of previous year’s score from the current year. As the result of these transformations, both dependent variables are measures of percentage point change in rule of law. Using change in rule of law, rather than the raw level, alleviates the self-selection concerns that states with similar levels of rule of law tend to join the same economic IOs. Measuring rule of law in terms of change allows to instead focus on testing whether a state adjusts its rule of law in response to changes in the average rule of law of its fellow economic IO members—the relationship posited in the research hypothesis. In addition, first differencing ensures that the statistical results are not driven by the cross-sectional variation in the rule of law, but are instead derived from both temporal and cross-sectional variation. The variation in the dependent variable measured in terms of change comes, in other words, from the panels of countries with over-time variation in rule of law, while panels of countries that did not experience changes in the rule of law during the period under investigation score “0” on the dependent variable and do not contribute to the likelihood.

**Independent Variables**

This paper posits a spatial relationship between a state’s level of rule of law and the average rule of law or its fellow IO members. To appropriately model this effect, the central independent variable of interest is measured as a spatial lag rather than as state-level covariates (Beck, Gleditsch and Beardsley 2006; Franzese and Hays 2008; Hays, Kachi and Franzese 2010).
Figure 1: Conceptualizing Spatial Lags. An Illustration

<table>
<thead>
<tr>
<th>IO1</th>
<th>IO2</th>
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<tr>
<td>State A</td>
<td>State B</td>
</tr>
<tr>
<td>State C</td>
<td>State D</td>
</tr>
<tr>
<td>State A</td>
<td>State B</td>
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</table>

The data on states’ memberships in economic IOs comes from Boehmer, Gartzke and Nordstrom (2004). The spatial lag variable, capturing the average rule of law of a state’s fellow members in economic IOs, is constructed as a series of \( t \times N \) matrices, in which \( N \) represents the number of states for each year of observation \( t \). Each cell \( i_t, j_t \) of each matrix represents the number of shared economic IOs between states \( i \) and \( j \) in year \( t \), divided by \( i \)'s total shared memberships in that year.\(^8\)

For example, suppose state A is a member of two IOs: IO\(_1\) made up of states A, B, C, and D; and IO\(_2\) made up of states A, B, and E (see Figure 1).

The spatial matrix of joint IO memberships in this example can be summarized in the following way:

\[
\begin{array}{cccccc}
   & A & B & C & D & E \\
A & 0 & 2 & 1 & 1 & 1 \\
B & 2 & 0 & 1 & 1 & 1 \\
C & 1 & 1 & 0 & 1 & 0 \\
D & 1 & 1 & 0 & 1 & 0 \\
E & 1 & 1 & 0 & 0 & 0 \\
\end{array}
\]

To standardize by rows, we simply divide each cell by the row total, obtaining the following weights matrix:

\(^8\)Dividing the cell values by the row total is also referred to as row-standardization. Row-standardization is a standard approach to constructing spatial lags (Franzese and Hays 2008; Hays, Kachi and Franzese 2010; Plumper and Neumayer 2010).
In accordance to this standardization approach, the spatial lag for state A is:

\[ w_{AY_j} = 0.4 \times (\text{Rule of Law}_B) + 0.2 \times (\text{Rule of Law}_C) + 0.2 \times (\text{Rule of Law}_D) + 0.2 \times (\text{Rule of Law}_E) \]  

Note that the diagonal entries of each matrix represent a state’s number of shared IO memberships with itself and are coded as “0.” To account for self-contagion, or the temporal dependence in the level of rule of law, the statistical model includes a one-year lagged rule of law measure (the raw value rather than the change in value).\(^9\)

### Control Variables

The statistical model accounts for geographical diffusion, which is the main alternative diffusion mechanism, posited by the previous literature on rule of law (e.g., Simmons 2000). This is done by controlling for the average rule of law of a state’s contiguous neighbors, \(\text{Geography} \), constructed according to the process described above. Data on geographical contiguity is obtained from the Correlates of War (COW) Project (Stinnett et al. 2002).

In order to demonstrate diffusion, it is also necessary to rule out the possible “common exposure” explanations, which attribute convergence in the rule of law to the effect of either a common system-level variable or similar domestic conditions. Scholars have linked rule of law to the level of democracy, arguing that rule of law may only persist in states with strong limits on the government (Weingast 1997). I model this by controlling for \(\text{Polity Change} \), measured as the first difference of the 21-point Polity II variable (Marshall and Jaggers 2008). I expect that changes in Polity score will be positively correlated with the changes in the rule of law.

Rule of law enforcement is costly. It requires training and maintaining an adequate police, judicial, and penitentiary systems. Hence, I control for \(\text{Economic Growth} \), measured as a logged

\(^9\)The temporal lag of the actual value of rule of law rather than the first difference is included to account for the effect of “diminishing returns”: i.e., states with already strong rule of law have less room for improvement than states with weak rule of law.
first difference in GDP/capita (in constant USD, 2000). I expect a positive relationship between the economic growth and improvements in the rule of law (Fearon and Laitin 2003; Rodrik, Subramanian and Trebbi 2002). This data comes from the World Development Indicators (World Bank 2005).

States whose economies depend on international trade and investment have a stronger incentive to enforce rule of law, as state’s ability to attract and retain international business hinges on its level of property protection, contract enforcement, as well as banking and insurance laws (Souva, Smith and Rowan 2008). To model this, I control for changes in trade volumes \textit{Trade}, measured as a logged and first differenced sum of imports and exports in a given year (in millions, constant USD, 2000). I also control for change in \textit{Net FDI inflows}, which is measured as FDI inflows minus FDI outflows in a given year, logged and first differenced (in millions, constant USD, 2000). Data on \textit{Trade} is constructed using COW Trade data (Barbieri, Keshk and Pollins 2009), while FDI data comes from the World Development Indicators.

Scholars have demonstrated that British colonies have been more successful at establishing domestic legal institutions, due to the peculiarities of the common law system over other legal systems (Mitchell and McCormick 1988; Mitchell, Ring and Spellman 2013). I control for this by including an indicator variable of whether a state is a former British colony.

Finally, rule of law, just like other political institutions, are not impervious to political shocks and upheavals, such as international or civil wars. I model this by controlling for whether a state in involved in an \textit{International} or \textit{Civil War} is a given year. This data is obtained from the COW Project (Ghosn and Bennett 2003; Sarkees 2000).

Empirical Analysis

The results of the empirical analysis are presented in Table 1. The first two models are estimated using L&S rule of law data, while models 3 and 4 employ S&P rating. To isolate the effects of the main theoretical variable—shared economic IO memberships—from mere geographical diffusion, I first estimate a model, which includes just the control variables and the \textit{Contiguity} variable (Models 1 and 3 of Table 1). Then I re-estimate the model with the addition of the \textit{Economic IOs} variable (Models 2 and 4 of Table 1).

The bottom part of the table presents the coefficients on the spatial lags of \textit{Economic IOs} and \textit{Contiguity}. Just like in traditional regression analysis, we interpret the direction of spatial effects
by looking at the signs on the coefficients. In Model 1, the coefficient on Contiguity is positive and statistically significant, which suggests that a state is likely to strengthen its rule of law in response to positive changes in the average rule of law of its contiguous neighbors. This positive effect on Contiguity disappears, however, once we add the Economic IOs variable (Model 2). In Model 2, the effect of Economic IOs is positive and statistically significant, while the effect of Contiguity is no longer statistically significant. The coefficient on Economic IOs in Model 2 is also greater in absolute value than the coefficient on Contiguity in either Model 1 or 2. This suggests that the statistical significance on Contiguity in Model 1 may be simply due to the omitted variable bias: when we omit the real driving factor of rule of law diffusion—Economic IOs—its effect is partially picked up by Contiguity—a related, yet different concept.

The results presented in Models 3 and 4, which estimate the effects of the same covariates on the S&P ratings, provide some additional evidence in favor of diffusion through economic IOs. The effect of Contiguity is not statistically significant either when modeled by itself (Model 3) or in conjunction with Economic IOs. The effect of Economic IOs is positive and statistically significant, suggesting once again that states tend to improve their own credit ratings in reaction to the improvement in the average credit ratings of the states, with shared memberships in economic IOs. Models 3 and 4 provide a great robustness check on the empirical results. It is important to remember, however, that these models are based on a more limited sample of states, and as a result,
Table 2: Wald’s F-Tests Comparing the Effects of Economic IOs and Contiguity Spatial Lags

<table>
<thead>
<tr>
<th></th>
<th>L&amp;S Different from Contiguity</th>
<th>S&amp;P Different from Contiguity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.08***</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Note: *** p<0.01
Cells represent \( \chi^2 \) statistics of the corresponding tests of equivalence.

are associated with lower statistical power—a possible explanation for the lack of significance on several variables, including Contiguity.

The difference in the effects of Economic IOs and Contiguity in Models 2 and 4 is further explored using post-estimation F-tests (Table 2). For Model 2, the F-statistic is positive and statistically significant. This means that the coefficient on Economic IOs is statistically different from that of Geography: states that share economic IO memberships exhibit stronger spatial dependence in their levels of rule of law than geographically contiguous states. There is no evidence, however, of a similar pattern in Model 4, in which rule of law is measured using S&P ratings. For Model 4, and F-test provides no evidence of a statistical difference between the effects of Economic IOs and Contiguity. The lack of statistical significance, however, may be attributed to the lack of statistical power.

When interpreting spatial effects, one must also keep in mind that the coefficients represent only the initial pre-dynamic effects or the effect of covariates in the absence of spatial feedback (Franzese and Hays 2007). As is the case with any lagged dependent variable, effects of spatial variables are nonlinear; they enter the model as multipliers on the neighbors’ values of the dependent variable. As a result, these variables have non-constant marginal effects that change (1) with the changes in neighbors’ dependent variables, (2) with unit i’s own changes on the dependent variable in the previous time period, (3) and over time. Therefore, interpreting the marginal effects of the spatial coefficients requires calculating their substantive effects (Franzese and Hays 2008; Hays, Kachi and Franzese 2010). An example of the substantive effect of joining an economic IO, all else held constant, is presented in Figure 2.

Figure 2 shows the hypothetical effect of including an average size and income European country (such as Poland in 2000) into an economic IO made up predominantly of states with strong rule
Figure 2: The Effect of Joining the EU on Poland’s Change in Rule of Law

Note: Predicted effects are generated using Monte Carlo simulations, based on values for 2001 or the last year, for which the data is available. Red lines represent predicted change in rule of law, assuming Poland joined the EU at time $t=1$ (the spatial weights matrix of shared economic IO membership has been modified as if Poland was included in the EU in year $t=1$). Blue lines represent predicted rule of law, assuming Poland did not join the EU at time $t=1$ (unmodified spatial weights matrix of shared economic IO memberships as of 2001).

We see that although the initial effect of this additional membership is small—approximately 0.1 points on 100-point rule of law scale—it grows substantially stronger over time, reaching 1-4 points—more than a tenfold increase—after ten time periods, and about 2-5 points after twenty time periods. This result has some face validity, as it supports the more general view of diffusion as a slow and gradual process, rather than a fast and easy outcome (Berndt and Woods 2013a,b).

Note that this is an isolated effect of joining a single economic IO. In practice, this effect would likely be much stronger, as joining one IO usually leads to joining a set of other IOs with similar memberships. For example, recent joiners of the EU also frequently join the Council of Europe and

---

10 The choice of Poland for this demonstration is not accidental, as Poland indeed joined the EU, albeit in 2004. I construct the demonstration using the data from 2000, as this is the last year, for which the data is available on all variables in the empirical model.
the OECD, either concurrently or within close temporal proximity (Pevehouse 2005). Each such additional IO membership makes an independent contribution to the spatial effect’s substantive strength.

The control variables act as expected, replicating the findings of the previous literature. The coefficient on the lagged value of the rule of law is negative and statistically significant in the first two models: states with higher levels of rule of law in the previous year are less likely to experience positive changes. Such decreasing marginal returns are common to many indicators, such as democracy or economic growth. The coefficient on Polity Change is positive and statistically significant in the first two models, suggesting that improvements in democracy tend to be associated with improvements in the rule of law. Trade is positive and statistically significant in Model 1, suggesting that increases in trade volumes lead to improvements in the rule of law. GDP Growth is positive and statistically significant in all models, which implies that rule of law enforcement requires strong economic capabilities. As expected, Interstate and Civil War have a negative effect on the rule of law, as war undermines domestic institutional capabilities. Finally, when measured as S&P credit ratings, rule of law is positively affected by increases in Net FDI.

Conclusion

International actors do not exist in a political vacuum. By engaging in trade, forming alliances, or joining IOs, states come into contact with one another, and this contact is not inconsequential for their domestic behavior. Inter-dependence between international interactions and domestic outcomes has been recognized by scholars for quite some time. Yet, until recently, it has been rarely explicitly modeled or accounted for in empirical analyses, primarily due to the lack of appropriate methodological tools.\footnote{For exceptions, see Crescenzi (2007), and Lee, Muncaster and Zinnes (1994).} This paper accomplishes this task by exploring diffusion of the rule of law through economic IOs, using a spatial econometrics approach.

Theoretically, this paper develops two complementary causal mechanisms of diffusion: competition and socialization. Both theoretical approaches expect convergence in the rule of law levels among states with shared memberships in economic IOs. According to the competition theory, shared IO memberships provide reference groups that are used to evaluate states’ investment climate. International investors and firms use such reference groups in making important business decisions, such as how and where to allocate their funds. This creates incentives for states with
shared IO memberships to compete against one another for these lucrative economic opportunities. As a result, IO members converge on the political and economic outcomes related to attracting investment—or the level of the rule of law—an umbrella term used here to refer to such domestic factors as enforcement of contracts, property rights, protections against expropriation, and other violations. Socialization theory posits a complementary causal process, arguing that legal norms diffuse through social interaction among economic and political elites. IOs provide the fora for such interaction, facilitating elites exchanges, or work by policy entrepreneurs.

This paper’s theoretical framework is rather intuitive, not only for the scholars of IR, but also for ordinary citizens, such as those who gathered in Ukraine’s Independence Square in fall 2013—winter 2014 to demand that their government sign an EU Association treaty, which promised a break from pervasive lawlessness and corruption. The empirical results provide support for the theory. Shared memberships in economic IOs exhibit a positive effect on rule of law—an effect that crowds out that of mere geographical contiguity. The regression estimates are supplemented by the analysis of substantive effects, which shows that that the effect of IO membership on rule of law grows consistently and substantially over-time. The findings fit with the more general view of democratic diffusion as a gradual process, rather than an instantaneous outcome.
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