



An Integrated Model of Legal Transplantation: The Diffusion of Intellectual Property Law in Developing Countries*

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Why do some countries adopt exogenous rules into their domestic law when those rules contravene their specific interests? We draw on the policy-diffusion literature to identify four causal mechanisms that we hypothesize explain the adoption of such rules. While existing literature treats these mechanisms as independent, we argue that each works in combination with the others to facilitate legal transplantation. While one mechanism—coercion—tends to initiate the transplantation process, it fades over time and three others largely supplant it: contractualization, socialization, and regulatory competition. These mechanisms act in a mutually supportive manner. We test our claims via a quantitative analysis of legal transplants in the field of intellectual property (IP) that incorporates an original index of IP protection in 121 developing countries over more than 14 years. This article concludes with a plea for theoretical eclecticism, acknowledging multicausality and context-conditionality. Any comprehensive explanation of legal transplantation must include the identification of mutual reinforcement between causal mechanisms, rather than simply rank their relative contributions.

“[Laws] should be so specific to the people for whom they are made, that it is a great coincidence if those of one nation can suit another” argued Montesquieu in *The Spirit of the Laws* (1961:295). Apparently, history is full of coincidence. Laws frequently travel across both time and space. Sections of the Code of Hammurabi, enforced in Babylonia four thousand years ago, were integrated into Persian law, made their way into Greek law, and were subsequently incorporated into Roman law (Watson 1974:22–23). The Roman legacy then inspired the European Civil Codes that include elements of the ancient text. More recently, the European Codes have served as models for legal reform in countries as diverse as Peru, Egypt, and Japan.

Legal transplantation proves particularly puzzling in situations of asymmetric interests: Those in which the

interests of the adopting state conflict with those of the state in which the rule originated. Why would a country adopt foreign rules that run counter to its own interests? Existing scholarship lacks adequate answers to this question.

This article argues that the explanation for legal transplantation lies not in any single causal mechanism but in the succession and reinforcement of multiple mechanisms. In making this claim, we favor analytical eclecticism and answer the call of Sil and Katzenstein for “complex causal stories that forgo parsimony in order to capture the interactions among different types of causal mechanisms normally analyzed in isolation from each other within separate research traditions” (2010:412).

The article proceeds in three main sections. The first draws upon legal and political scholarship to build a typology of causal mechanisms for legal transplantation. It introduces an integrated understanding for their interaction under the scope condition of asymmetric interests. While the literature typically presents the mechanisms as being mutually exclusive, this article explores the possibility that they may, in fact, act in concert with one another. In doing so, they facilitate the adoption and maintenance of the legal transplant. The second section presents the case of intellectual property (IP) as an example of the dynamics of legal transplantation under asymmetric interests. It also introduces a new index of IP rules in force in 121 developing countries more than 14 years. The third section of this article examines the integrated understanding in light of quantitative evidence relating to IP. It puts this evidence into context through the use of examples explored in the literature. The results of this examination lead us to conclude that multicausality and context-conditionality constitute critical factors in understanding complex phenomena such as legal transplantation.

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Theoretical Framework

Defining Legal Transplantation

We define legal transplantation as the adoption into the national legal system by one state (the “adopter” country) of a rule originating in a foreign state (the “originator” country). Legal transplantation differs from both coordinated and uncoordinated legal convergence. Coordinated legal convergence occurs when two groups of lawmakers each agree to move their respective systems toward a third and common point, often defined by a treaty (Drezner 2001:53). Uncoordinated legal convergence arises when states adopt parallel yet independent legislative processes leading to identical legal rules in both countries, usually as a reaction to similar conditions (Holzinger and Knill 2005:792). In contrast, legal transplantation is a process through which the adopter implements a rule formulated in and for the originator country.

Much of the debate among legal comparativists on transplantation centers on the suitability of the surgical metaphor. Watson, who coined the term “legal transplant,” conceptualizes law as a collection of codified rules that can be easily displaced since “there is no simple correlation between a society and its law” (1974:108). On the other hand, Legrand (2001), one of Watson’s fiercest critics, argues that laws exist within cohesive legal systems that reject alien rules. Legrand views successful transplants as unlikely because they require transplanting an entire legal culture—including its doctrines, procedures, and institutions. Most authors fall between these formalist and culturalist perspectives, recognizing that the adopting legal system will likely interpret, apply, and enforce transplanted rules differently.

We agree that the term “transplant” fails to adequately capture the subtle process of adaptation involved in taking a legal concept developed in one context and incorporating it into another. However, since legal scholars widely employ the term, we favor it over alternatives. When discussing the process of legal transplantation, we refer solely to the transplantation of the rules themselves and make no claim in respect of their interpretation or enforcement.¹

While a rich and subtle legal scholarship examines the nature and types of legal transplants, jurists have yet to establish the mechanisms that explain legal transplantation in the first place. Most of the legal literature tends to rely on vague explanations for the cause of the transplant, such as economic liberalization or the prestige of foreign laws. Other studies suggest that transplantation is more likely between culturally, institutionally, or economically similar countries (Berkowitz, Pistor, and Richard 2003:167; Simmons and Elkins 2004:187). While the latter may be true, it constitutes a facilitating condition rather than a causal mechanism.

A Typology of Causal Mechanisms

In contrast to the juridical scholarship on legal transplants, the study of policy transfers and policy diffusion identifies a number of explanations for the adoption by one country of policies previously crafted in another (see

Dobbin, Simmons, and Garrett 2007 for a review of this literature). While political scientists have yet to assess the scope, magnitude, and frequency of policy diffusion, they have proven particularly creative in conceptualizing causal processes. By combining the descriptive analysis of transplantation in the legal literature and the causal mechanisms studied in the policy-diffusion literature, this article provides an opportunity for interdisciplinary research integrating both legal and political studies and comparativist and internationalist perspectives. This creates the opportunity for each approach to palliate the weaknesses of the other.

This article builds on the policy-diffusion literature to identify five ideal-type causal mechanisms of legal transplantation. We call the first mechanism *emulation*, a process that is sometimes referred to as “lesson-drawing” (Rose 1991:4) or cost-saving transplants (Miller 2003:845). It suggests that legal transplantation occurs when lawmakers, confronted with a problem, look across national borders for effective and transferable solutions. US-style plea-bargaining could provide, for example, a solution to countries struggling with overburdened criminal justice systems. Using foreign experience becomes a rational strategy to save time or money associated with trial and error.

Coercion, the second ideal-type mechanism, occurs when a state promotes its rules through the use of material power, whether military or economic. We distinguish between two types of coercive legal transplantation processes. Imperialistic transplantation, also called “direct imposition” (Dolowitz and Marsh 2000:9), involves the imposition of foreign legal rules without the consent of the adopter country. Imperialistic transplantation occurred, for example, when Japan introduced US-inspired civil and political rights into its constitution during the allied occupation. The more common “indirect imposition” occurs when the mere threat of negative sanctions provides the incentive for countries to voluntarily transplant exogenous rules.

The third ideal-type mechanism, *contractualization*, occurs when states bargain with one another in relation to a legal rule. In order to acquire acceptance of transplanted legal rules, those negotiations usually include trade-offs linking two or more issue-areas. One state will typically promote its own legal rules as constituting the common standard governing a particular issue-area. At the same time, it offers compensation or side payments in another issue-area. This *quid pro quo* arrangement is then formalized by an international treaty. US law on investment protection, for example, spreads to several countries via free trade agreements, offering the prospect of greater access to the American market in exchange for adopting US-style investor protection rules (Morin and Gagné 2007:59). Contracting parties do not necessarily negotiate as equals, and their contractual agreement does not necessarily result in a balanced outcome. The boundary between coercion and contractualization blurs, particularly where a country’s leaders feel compelled to enter into a treaty to avoid economic harm. Nevertheless, for the limited purposes of this article, we consider as a contractual arrangement (rather than as an occurrence of coercion) any treaty in which there exists a *quid pro quo* beyond the elimination of harm or the threat of harm.

Under the fourth ideal-type mechanism, *regulatory competition*, lawmakers adopt foreign rules, whether or not effective in addressing domestic issues, in order to better position their country in a competitive world (Radaelli

¹ There is a recognized gap between the formal existence of a legal rule and its interpretation and enforcement. We limit our discussion to substantive legal rules but understand that a legal system is much broader than a collection of legal rules and also includes general principles, legal administrations, enforcement mechanisms, etc.

2004). Regulatory competition usually presents itself in one of two opposing versions. The “race to the bottom” version assumes that lawmakers adopt the lowest regulatory standards of competing countries, such as minimal levels of labor and tax regulations, to avoid capital flight (Drezner 2001:57). By contrast, the “race to the top” generally focuses on reputational, rather than economic, competition. Under this second version, countries seek the cutting edge of legal creativity in order to generate legitimacy or political rent, a trend especially prevalent in the areas of consumer rights and environmental protection (Vogel 1995).

The fifth ideal-type mechanism is *socialization*, defined as a process directed toward the internalization of the principles, beliefs, and norms of a foreign community (Schimmelfennig 2000:112; Checkel 2005:804). In the context of legal transplantation, it suggests that ideational transfers can lead to legal transfers. A state more frequently adopts a foreign rule if persuaded of its appropriateness, that is, if the legal rule in question resonates with established social norms and fits with the collective identity of the adopter country. This process of legal transplantation relies on the flexibility of idea may actively transfer through a wide variety of entrepreneurs, including NGO activists, university professors, business organizations, and legal communities. The most powerful of those entrepreneurs can most successfully diffuse their ideas (Bach and Newman 2010:523).

A typology is not a theory and, arguably, a causal mechanism examined in isolation cannot explain a complex phenomenon such as legal transplantation. Current studies on policy diffusion remain limited, however, either by focusing on a single mechanism or by overlooking the connections that may exist between mechanisms. This article addresses this lacuna by exploring complementarities and reinforcements between causal mechanisms under the scope condition of asymmetric interests.

The Scope Condition of Asymmetric Interests

Most studies of legal transplantation focus on cases in which countries share an interest in harmonization. While one country might benefit more than another from harmonization, there exists an underlying assumption that harmonization of environmental or trade regulations contributes to the common good. In those cases, legal transplantation can provide an absolute gain for all jurisdictions even if benefits remain unevenly distributed among them. Explaining legal transplantation in situations of asymmetric interests between an adopter and an originator country continues, however, to puzzle.

By asymmetric interests, we mean situations in which the originator country has a strong interest in exporting its rules while the prospective adopter perceives itself as having a strong interest in maintaining its dissimilar rules, at least with respect to the specific issue-area that the legal transplant covers. The diffusion of “know your customer” rules in domestic banking regulations provides a typical case of legal transplant under asymmetric interests (Sharman 2008:640). On the one hand, the United States and several European countries have an interest in promoting their own banking standards in an effort to prevent money laundering and tax evasion. On the other hand, some offshore jurisdictions have an interest in providing banking clients with greater privacy protection in order to attract capital to their financial institutions. Why then do those offshore jurisdictions increasingly duplicate

US and European banking rules when doing so appears to run counter to their interests? This case, like other cases of legal transplant under asymmetric interests, can only be explained by looking to the power imbalance between originator and adopter countries.

Of all the causal mechanisms identified in the previous section, emulation is the only one to ignore power imbalances. While emulation may be a prime mechanism behind many legal transplants, one would expect it to have a substantially diminished role in the context of perceived asymmetric interests. The reason for this is simple: the divergent interests in the asymmetric context undermine the cost savings logic of emulation.

There are two limitations to this argument. First, while the interests of the adopter country may, as a whole, be opposed to those of the originator country, there will likely be actors (for example, transnational or domestic corporations) within the adopting country who see their interests aligned with those of the originator. Given our scope condition of asymmetric interests, however, the pro-adoption lobby will unlikely be the dominant interest group. Second, if policymaker perception of asymmetry actually becomes weakened whether through this internal lobbying or through the other mechanisms—for example, if a country becomes persuaded that its interests are aligned with those of the originator country—then the cost savings logic of emulation might come to dominate.

The remaining four mechanisms—coercion, contractualization, regulatory competition, and socialization—should play a central role in the case of asymmetric interests. A state may use coercion to render the costs of not adopting a legal rule sufficiently high as to outweigh the rule’s inherent costs. Through contractualization, a state can trade the negative costs of adopting an inconvenient legal rule against gains elsewhere. Under the regulatory competition model, a country may agree to transplant an unfavorable rule when it believes that it will suffer greater reputational or economic losses by not running with or even leading the crowd. And socialization may lead lawmakers to underestimate the costs or overestimate the advantages of an inappropriate rule. Under each of these mechanisms, more powerful states are likely to act as the originators of transplanted rules as they can more easily coerce other states, bargain from a position of strength, be an originating cause of regulatory competition, and diffuse their ideas globally. Thus, each of these mechanisms has the potential to explain legal transplantation, at least in part, in the context of asymmetric interests.

An Integrated Model of Legal Transplantation under Asymmetric Interests

Most of the literature on policy diffusion suggests that each causal mechanism constitutes a competing and total explanation for policy transfers. Some studies suggest that the manipulation of material incentives is more effective than the alteration of substantive beliefs (Kelley 2004; Schimmelfennig and Sedelmeier 2004; Elkins, Guzman, and Simmons 2006; Cao 2009), while others claim the opposite: that socialization has a greater impact than does coercion (Berkowitz et al. 2003; Meseguer 2004). Contrary to these contentions, we argue that originator countries rely on a combination of coercion, contractualization, regulatory competition, and socialization—along with a smaller emulation effect—to disseminate and maintain their own set of rules in situations of

asymmetric interests.² While some authors discount the potential of the mechanisms to interrelate, we lack a fully integrated understanding of this phenomenon (Sharman 2008:636).

Given the conflicting nature of asymmetric interests, an originator country will likely initiate the process of legal transplantation through the use of coercion. The more that exogenous rules conflict with the material interests of the adopter, the more likely that active coercion initiated the transplantation. Yet coercion remains a politically limited mechanism and cannot explain, alone, the diffusion of the same set of rules in a large set of countries. Even when the most powerful global actor deploys it, unilateral coercion can only effectively target a few countries at a time—not the entire international community (Holzinger and Knill 2005:778). Moreover, the extensive use of coercion risks provoking political backlash and feeding animosity against the coercing country and its legal standards.

Despite these limitations, coercion can play an important role in the bargaining process leading to contractualization. At a certain point, the originator will rationally switch emphasis away from the mechanism of coercion to that of contractualization (as we have defined). Contractualization provides, as opposed to coercion alone, a stable institutional context and continuous incentive through which the originator can maintain and extend legal transplantation to additional states. This remains true even when the contractual agreement itself was negotiated under coercion. For adopter countries, formalizing the transplantation process through contractualization can also prove beneficial. This is because adopting foreign rules as part of a *quid pro quo* bargain renders political opposition less likely at the domestic level than accepting the same rules under threat or actual application of coercive pressures. Under this perspective, contractualization may provide stability and predictability to both the originator and the adopter of the transplanted rule.

While contractualization may not completely displace coercion, it tends to supplant it. Once a contractual agreement is formalized, the further use of coercion to extend transplantation to rules beyond the agreed framework will likely prove politically and legally ineffective. Indeed, several contractual agreements provide safeguards against the use of direct coercion. Moreover, coercion violating internationally agreed upon norms is seen as illegitimate, and this perceived illegitimacy significantly decreases the effectiveness of the mechanism (Pelc 2010).

While contractualization may diminish the effectiveness of further unilateral coercion, contractualization can initiate a synergic dynamic with regulatory competition. Baldwin (1997:877) captures this dynamic through his “domino theory of regionalism,” under which one or several bilateral trade agreements produce trade diversion from countries that have not signed bilateral agreements. This generates, in turn, pressure on non-signatories to enter into their own bilateral agreements. For example, developing countries do not have an incentive to duplicate US rules on investment protection unless a competing investment-receiving country acquires a competitive advantage by signing a bilateral investment treaty with the United States (Elkins et al. 2006). Owing to this reality,

several developing countries have autonomously transplanted into their domestic legislation trade and investment rules from the United States; some even became *demandeurs* for bilateral agreements with the United States formalizing further transplants.

Contractualization can also pave the way for socialization in three different ways (Ikenberry and Kupchan 1990:290). First, at the institutional level, contractualization can provide the context in which socialization takes place. Various agreements provide for the creation of joint committees or annual summits in which bureaucrats and policymakers interact, debate, and share ideas. Numerous studies show that contact at an intergovernmental level, especially within relatively confidential and informal settings, facilitates socialization processes (for example, Schimmelfennig 2000; Kelley 2004; Checkel 2005; Cao 2009; Greenhill 2010). Second, at the discursive level, contractual agreements can become powerful rhetorical weapons. Law has the general characteristic of appearing as an intrinsically legitimate force (Kapczynski 2008; Brunnée and Toope 2010). Contractual agreements can thus favor what Pierre Bourdieu calls the “genesis amnesia,” (1995:3) that is, forgetting that the adopted rules resulted from a bargaining process in which coercion may have been used. Third, at the cognitive level, contractualization may generate an uncomfortable cognitive dissonance when the political elite in adopter countries do not believe in the value of agreed transplanted rules. According to cognitive psychologists, cognitive dissonance is usually solved by changing beliefs to fit actual behavior, rather than the other way around (Festinger 1957). Therefore, once countries reach an agreement, their political elites tend to convince themselves that its least favorable clauses are actually less harmful than they had previously feared.

Regulatory competition can also favor socialization under a dynamic akin to what Finnemore and Sikkink (1998:895) call a “norm cascade.” Under this process, once a critical mass of countries adopts a given norm, the norm reaches a tipping point after which it begins to diffuse independently, without the need for the material incentive initially required to reach that point. As an increasing number of countries transplant a set of rules, those rules become normalized and create social and cognitive pressure for conformity. No longer viewed as exogenous, these rules become the standard for countries with a given collective identity, such as “democratic,” “developed,” or “liberal.” As Checkel argues, what starts as strategic and incentive-based behavior “often leads at later points to preference shifts” (2005:814).

In turn, socialized decision makers believing in the virtue of transplanted rules, but facing domestic opposition, may seek to lock in the rules by contractually binding their country to them. The bargaining process would be further facilitated by the fact that those socialized decision makers no longer perceive the costs of the transplanted rule and do not therefore insist on receiving compensation for their adoption. Likewise, socialization can reduce barriers to regulatory competition as socialized decision makers desiring to extract material or reputational gains at the international level may seek to transplant an even greater number of foreign rules than their competitors (Likhovski 2009).

We derive three main hypotheses from this integrated model under asymmetric interests. Our first is that an originator state’s coercion is likely to initiate legal transplantation in adopter countries and to favor contractual-

² We thus put aside, for the purposes of this article, whether and if the originator country modifies its own rules as a result of the process of legal transplantation to an adopter country.

ization, while contractualization is likely to lessen the effectiveness of coercion against actual and potential adopters (H1). The second hypothesis is that regional competition and socialization each also positively influence legal transplantation from originator to adopter countries (H2). The third hypothesis builds on the second and focuses on the interrelationships between the three mechanisms, stating that contractualization, socialization, and regional competition operate in synergy, facilitating and mutually reinforcing one another to promote further transplantation in adopter countries (H3). H1 examines the sequence of causal mechanisms, H2 their concomitance, and H3 their interrelationship.

Methods and Data

The Case of Intellectual Property Law

We selected the empirical case of intellectual property (IP) to illustrate our integrated theoretical model. IP law provides a textbook example of asymmetric interests. Although economists may differ on the optimal level of IP protection for any given country, they do agree that developed and developing countries have very different optima (Chen and Puttitanun 2005; Kim, Lee, Park, and Choo 2012). On the one hand, knowledge economies seek to maintain their economic advantage by providing and promoting strong IP standards. Not only does the United States (often at the behest of prominent multinational corporations) most actively promote higher IP protection globally, it benefits most from upward IP harmonization. In 2011 alone, it received more than net US\$84 billion in international royalties and licensing fees. Developing countries, on the other hand, have an interest in providing lower levels of protection for IP, which foreign investors largely own. This strategy allows local businesses to acquire foreign technologies and ensures low retail prices for products ranging from medicines and agricultural plant varieties to word-processing software and auto parts. When judged solely on the basis of economic interests, IP rules should differ significantly between developed and developing countries.

Despite these asymmetries of interest, IP has become increasingly harmonized globally. So strong is this tendency that legal comparativists often consider IP as a classic example of legal transplant emanating from the United States (Mattei 2003:19–23; Miller 2003:847; Shi 2010). The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs), for example, notoriously compels WTO members to raise their legislated IP protection to a level closer to that of the United States.

Less well known is the fact that many developing states have gone beyond the minimum obligations required of them under TRIPs to align their IP laws more substantively with higher US standards. For example, Honduras protects copyright for 75 rather than 50 years; Guatemala authorizes the patentability of plants; Cambodia has criminalized the dissemination of technologies intended to circumvent copy protection, and Vietnam accepts the patentability of new uses of previously known pharmaceutical products. TRIPs does not require these requirements but each aligns with US IP rules. Overall, a majority of low- and middle-income countries exceed the minimum requirements of the TRIPs agreement and have transplanted rules that are seen as largely benefiting foreign IP holders. As Deere observes, many of the poorest WTO members—countries that the economic literature would

anticipate adopting the lowest levels of IP protection—“opted for some of the world’s highest IP standards and made limited use of TRIPs flexibilities that might have helped them address social challenges in the areas of public health, education, and agriculture” (2009:102). This broad dissemination of US IP rules in developing countries demands an explanation.

The Construction of the Transplant Index

This article introduces a novel index to measure the extent to which developing countries have transplanted IP rules established in and specifically promulgated internationally by the United States. In doing so, we examine the processes through which the dominant global power, the United States, has caused developing countries to adopt IP rules that, by themselves, do not align with the economic interests of those countries. The new index is required as existing IP indexes are not suitable to uncovering the transplantation of post-TRIPs US IP rules. Those indexes include indicators, such as 20-year patent terms, that have become mandatory under TRIPs and thus are no longer relevant. The widely used Ginarte and Park index (1997), for example, captures little meaningful variation after 1994 when many of its indicators became mandatory for WTO members. Further, existing indexes often collect data for only a few years, or at 5-year intervals, whereas the mechanisms being examined require a more rigorous analysis based on yearly updates over longer periods. Last, some indexes are based on only a limited sample of countries (Sherwood 1997), or do not disclose their coding frames, making it impossible to update or expand on the data set (Ostergard 2000).

US-style IP rules have set the international standard for IP protection. We developed therefore an index measuring the adoption of those IP rules that are not required under TRIPs and specific to US demands for increased IP protection.³ This *Transplant Index* scores countries on a 0–9 scale. The higher a country scores, the more it has aligned its IP rules with those of the United States. Given the specificity of the rules modeled, we assume that it is unlikely that a particular country—even one favoring higher IP rights—would adopt those particular IP rules in the absence of US leadership. That is, we assume that in the absence of the United States having adopted and promoted those particular rules, the index would normally approach 0 for most developing countries.

Data were collected for each year from 1995 to 2008, coinciding with the initial coming into force of the TRIPs agreement. The *Transplant Index* covers all developing countries with a population of more than 1 million and for which data were available. The result is 121 countries and a sample of 1694 country-years. These results, as well as the complete list of indicators, coding values, and data sources, are available from the Appendix of the online version of this article.

Variables that Operationalize Causal Mechanisms

Unlike other studies on policy diffusion, we include all four mechanisms—coercion, contractualization, regional competition, and socialization—within our model. We

³ We acknowledge the same limitations as all others—except Sherwood (1997) who uses an idiosyncratic and irreproducible approach—in looking only at the formal adoption of IP rules rather than at their enforcement by the executive and judiciary.

also include GDP per Capita to capture innovation capacity that previous literature has linked to increases in IP protection, at least in part through the mechanism of emulation (Chen and Puttitanun 2005). Although GDP per Capita imperfectly proxies emulation, other domestic indicators for endogenous interests in stronger IP protection, such as research and development expenditure, were not available for several developing countries.⁴ Each causal mechanism finds representation in one or more variables (additional supporting information may be found in the Appendix of the online version of this article).

Two variables represent coercion. The first, *Priority Watchlist*, indicates whether the country was listed on the US Priority Watch List because of an IP-related concern the previous year. Under so-called Special 301 legislation, the United States Trade Representative (USTR) has the obligation to publish annually a Priority Watch List of countries that “deny adequate and effective protection of intellectual property rights” (19USC §2411). The coercive effect of this trade instrument stems from the fact that countries listed face the risk of trade sanctions unless they take appropriate measures to address the concerns raised. The second coercive variable, GSP Review, indicates whether a country was being reviewed under the generalized system of preferences (GSP) program due to concerns relating to IP protection the previous year. The GSP program offers unilateral duty-free treatment for thousands of products to designated developing countries. In determining whether a country may benefit from privileged trade access, the President has the statutory obligation to take into account “the extent to which such a country is providing adequate and effective protection of intellectual property rights” (19USC §2462). If US authorities consider that the country under review has not provided adequate IP protection, the country can no longer benefit from preferential treatment. Importantly, since both *Priority Watchlist* and GSP Review are expressions of threats rather than actual trade sanctions, we avoid the common selection bias in the sanction literature of capturing only failed occurrences of coercion and ignoring occurrences in which threats were effective in inducing behavioral change before being implemented.

Contractualization is represented by whether the country has signed and brought into force a bilateral free trade agreement (FTA) with the United States (*US Bilateral Agreement*). The Trade Promotion Authority of 2002 specifically required the USTR to ensure that US FTAs “reflect a standard of [IP] protection similar to that found in US law” (19USC §2102 and 3801). Although several studies note that bilateral FTAs signed by the United States provide a level of IP protection that goes well beyond what is required under the TRIPs agreement (Dere 2009:114–118), the actual transposition of these FTAs into domestic law remains largely undocumented. A case study on China suggests that some developing countries may actually agree to international IP standards knowing very well that they do not intend to fully implement them in domestic legislation (Mertha and Pahre 2005). This remains only a hypothesis since there is very little systematic evidence on the actual implementation of FTAs. Including US FTAs in our model provides an opportunity to bridge this gap in the literature.

Variables representing socialization are less straightforward. The transmission of ideas is notoriously difficult to capture empirically since socialization occurs through several pathways, not all of which are intentional, formal, or even conscious. Building on the existing socialization literature, we identify two pathways to socialization: university education and capacity-building training. While those pathways do not provide direct evidence that socialization occurred, they constitute recognized vehicles for socialization and can be assessed by quantitative measures.

The first variable used to represent socialization, IP Training, is the stock of IP-related training activities labeled as “technical assistance” or “capacity building” offered to the country by the United States since 1995 to the year in question.⁵ As the USTR notes, “perhaps the most important of the remaining tools [in promoting strong IP standards worldwide] is our ability to offer technical assistance” (USTR 2004). With this in mind, the US government established the Global Intellectual Property Academy (GIPA) to “present the US methods for protecting the IP rights of business owners” and expose foreign officials “to a US model of protecting and enforcing intellectual property rights” (USPTO 2010). In 2008 alone, GIPA provided training to more than 4,100 foreign officials (USPTO 2010). In addition, several business organizations sponsor training activities for developing country policymakers. The variable IP Training includes the number of training activities offered by either the US government or private organizations in partnership with the US government. In recent years, several studies noted that those programs could be major drivers of transplantation of IP rules in developing countries, but so far none has systematically investigated this hypothesis in controlling for alternative explanations (May 2004; Matthews and Munoz-Tellez 2006). Our article fills this gap.

The second socialization variable, *Population Studying in the US*, measures the number of nationals of a country studying in the United States in the previous year. Foreign students who populate the business, engineering, and science programs of US universities provide an indirect channel through which US norms can make their way into developing countries. During their time abroad, students are fully immersed in US culture and are socialized to the specific ideas concerning the importance of high levels of IP protection. They also absorb more general normative principles underpinning the IP system, such as individualism, rationalism, liberalism, and modernism. Once they return home, those individuals often integrate into the local elite, bringing with them exogenous beliefs that they acquired abroad. Studies of the effects of socialization in other fields have shown that foreign education is a powerful driver of transnational socialization (for example, Atkinson 2010). Scholars, however, have never fully examined its impact on a country’s level of IP protection specifically.

Our identification of an indicator of regulatory competition in the field of IP is a contribution to the literature that has, so far, lacked such a measure. Based on our unique *Transplant Index*, we have identified the highest value of that index within the region (other than the country in question), which we call *Regional Top Score*, as a strong indicator of regulatory competition. As the linear increase in the average value of the *Transplant Index* indi-

⁴ Moreover, research and development expenditures would have been inappropriate here because of doubtful relation with IP other than patents.

⁵ We follow UNCTAD in counting the number of events rather than the number of days. Since we are dealing with socialization, it is the networks created rather than time spent learning that we capture here.

cates, the form of regional competition involved in the field of IP is a race to the top. Countries compete against others in the region to attract FDI, especially in the much-coveted high-tech sector. One of the ways of doing so is to boost their credibility with foreign firms by strengthening IP laws. As investors will often compare countries within the same region before making their investments—and threaten to relocate their investments from countries with lower IP levels—some countries can be driven to adopt more protective IP rules.⁶ The country with the highest level of IP protection in the region, captured through the variable *Regional Top Score*, sets the pattern for competition within that region. We thus expect that if states actually engage in regulatory competition, one should observe that countries move their respective levels of IP protection toward their region's *Regional Top Score*; if not, we should expect this variable to have little influence on a country's *Transplant Index* value.⁷

In this study, we limited our analysis of the relative contributions of the above mechanisms to what we could measure quantitatively. Variables supporting our models were obviously limited by data availability. We did not have access, for example, to quantitative data on foreign investor threats to locate investments elsewhere if lawmakers failed to increase IP protection. Similarly, we found no reliable data on efforts made by business organizations to socialize the general population on the idea that strong IP protection is in their country's best interests. Those shortcomings make our empirical analysis more state-centric than our theoretical model would actually require. We leave it to future studies to provide more fine-grained qualitative evidence on the involvement of nonstate actors in the mechanisms analyzed here.

We selected a fixed effects model to effectively manage certain forms of unobserved heterogeneity and eliminate bias arising from omitted variables, provided that the omitted variables remain effectively fixed within each country. In order to assure the stability of our results, we only report those models whose patterns of significance maintained even when the standard errors were estimated using 1,000 bootstraps. The program StataSE 12 was used to perform all fixed effects analyses described in the article, and in all models, robust standard error estimates were used in order to correct for heteroscedasticity. All *F* test results in respect of our models are statistically significant at 0.001.

Results and Discussion

H1: From Coercion to Contractualization

Our empirical models are consistent with the first hypothesis that coercion sets the stage for legal transplantation but fades in its effect after contractualization takes hold. A number of scholars have already documented the importance of economic coercion in triggering the legal transplantation of US-style IP rules in the 1980s and early 1990s, both qualitatively (Braithwaite and Drahos 2000; May and Sell 2006) and quantitatively (Zeng 2002; Shadlen, Schrank, and Kurtz 2005). Those studies show that

coercion was instrumental during the Uruguay Round to conclude the TRIPs agreement, considered here as an instance of contractualization. In particular, the USTR effectively targeted Brazil and other developing countries opposed to that agreement with the use of its Special 301 and lifted privileged access to the US market under the GSP program to goods coming from Argentina, Honduras, India, Mexico, and Thailand. When countries finally yielded under this pressure, the US government noted that “the Special 301 annual review is one of the most effective instruments in our trade policy arsenal” (USTR 1997: 1) and that the GSP program was “an effective point of leverage with some of our trading partners” (USTR 2004). Scholars of IP politics largely concur with this assessment and recognize that the coercive strategies of the 1980s and early 1990s had a significant impact both on developing countries and on the negotiation process of the TRIPs agreement.

Our regression analysis extends the above findings and provides strong evidence that coercion continued to operate in the immediate post-TRIPs period. Table 1 shows that US coercion remained effective between 1995 and 1999 as both *Priority Watchlist* and *GSP Review* are positive and significant in that period in raising a country's *Transplant Index* value. Thus, the contractual arrangement of the TRIPs agreement does not appear to have immediately prevented further coercion.

This finding does not, however, contradict our first hypothesis. In fact, it was only in 1999 that a WTO Panel interpreted article 23(2) (a) of the WTO Dispute Resolution Understanding, concluding that the United States cannot unilaterally suspend trade concessions against another WTO member. As Table 1 suggests, the ruling's apparent result was that the continued practice of US watch lists lost some of its credibility. In the 2000–2008 period, *Priority Watchlist* is no longer significantly associated with the *Transplant Index*, while *GSP Review* is actually significantly but *negatively* associated with the *Transplant Index*. Despite the continued deployment of US coercive instruments against countries such as India, Indonesia, and the Philippines, they have had a limited effectiveness since 2000. We can infer from this finding that, while US coercion may have lessened the opposition of some developing countries to the TRIPs agreement during the Uruguay Round, the resulting WTO agreements, and especially the WTO Dispute Resolution Understanding, provided opportunities for those same countries to seriously limit the effectiveness of direct coercive tactics.

TABLE 1. The Influence of Variables on the Transplant Index, Before and After 2000 (Fixed Effects)

	1995–1999 Coefficient (543 observations; 110 groups)	2000–2008 Coefficient (1023 observations; 116 groups)
GDP per Capita	–0.00003	0.0001***
Priority Watchlist	0.379*	0.192
GSP Review	0.281***	–0.624**
US Bilateral Agreement	–	1.772***
IP Training	0.009*	0.016**
Pop. Studying in US	0.212**	0.285*
Regional Top Score	0.153***	0.103*
<i>R</i> ²	0.20	0.43
<i>F</i> _{6,109}	13.48***	14.63***

(Note. *Significant at ≤ 0.05 ; **Significant at ≤ 0.01 ; ***Significant at ≤ 0.001 .)

⁶ See, for example, Special 301 Submissions of PhRMA.

⁷ We assume that there are no independent correlations between a given country's *Transplant Index* value and the value of any of the independent variables at play within neighboring countries. We further assume that regulatory competition is not playing out along other groupings that correlate with regional groupings.

Beyond the WTO Panel ruling of 1999, we suggest at least two reasons why the Special 301 was less effective in the 2000s than it was in the early to mid-1990s. Both of these reasons are related, directly or indirectly, to the rise of contractualization in the form of the WTO agreements. The first is the growing perception among developing countries that coercion is a largely illegitimate means of pressuring governments to adopt TRIPs-Plus provisions. In public debate, the TRIPs agreement provides a baseline against which to assess the legitimacy of claims regarding the level of IP protection in developing countries. Although, from a legal point of view, TRIPs provides only a floor of obligation, it also provides a discursive ceiling on legitimate pressure. As a result, many countries and NGOs resist pressure to adopt higher standards of IP protection beyond that required by TRIPs. For example, when the Clinton administration sanctioned South Africa for its TRIPs-compliant measure favoring access to pharmaceutical patents, a network of transnational NGOs, including Oxfam and MSF, organized protests around the world and disrupted the lead up to the 2000 US presidential campaign (Sell and Prakash 2004:160–167). After several leading newspapers and members of Congress sided with South Africa, the US government backed off and reintroduced trade concessions. In a similar vein, coercion may also feed nationalist sentiments and provide developing country governments with an opportunity to increase their standing with domestic constituencies by resisting coercion perceived as illegitimate. This was the case in Argentina, Brazil, India, and Thailand where governments successfully opposed US pressure to increase their IP protection (Deere 2009). The negative effect of GSP Review on a country's *Transplant Index* in the 2000–2008 period may suggest that the use of coercion actually led to push back from targeted countries.

Second, the increased trade interdependence that followed the Uruguay Round provided some developing countries with the capacity to resist and even deter coercion. In 2001, when the United States threatened Brazil with the withdrawal of its duty-free access under the GSP, the Brazilian government calculated that the cost to US industries of this withdrawal would dissuade its actual imposition. As a result, Brazil confidently replied to the US threat by filing a request for consultations at the WTO that the US Patents Code was not TRIPs compliant. One month later, the United States dropped its case against Brazil.

The WTO agreements only represented the beginning of an era of contractualization as more and more countries agreed to sign bilateral FTAs endorsing US-style IP rules in exchange for preferential access to the US market. Arguably, the boundary between coercion and contractualization is blurred as all US FTAs were negotiated in the context of sharply asymmetric trade relationships. Until recently, the United States focused its FTA program on those countries that presented a combination of pronounced power asymmetries and the possibility of extracting tangible gains. It did not enter into a legally binding bilateral IP treaty with emerging economies such as Brazil, India, or China. Rather, it concluded bilateral agreements with countries that have some economic significance but that cannot realistically negotiate on an equal footing with the United States. Nicaragua, for example, whose FTA with the United States entered into force in 2006, exports more than 12% of its GDP to the United States, its primary trading partner, while the Uni-

ted States only exports 0.003% of its GDP to Nicaragua, its 78th trade partner. Some countries, such as Jordan and the Dominican Republic, were even placed on the Priority Watch List or on the Out-of-Cycle Review in the 3 years prior to the signature of their bilateral agreements with the United States.

While active coercion likely gave rise directly to some contractual negotiations, our results suggest that the general rise of the contractualization wave did not depend on explicit coercion. Returning to Table 1, our analysis supports the hypothesis that contractualization came to replace coercion in effectiveness in the 2000–2008 period. As the effectiveness of direct coercion was waning, contractualization became the principal mechanism driving the legal transplantation of IP rules. *US Bilateral Agreement* is not only significantly correlated with the *Transplant Index* in this period but, as Table 2 illustrates, outranks every mechanism other than socialization in terms of its explanatory strength over the entire 1995–2008 study. Most developing countries that signed a FTA with the United States are among those that demonstrate the largest increases in their levels of IP protection. These results suggest the existence of a strong link between the signing of bilateral agreements with the United States and higher levels of IP protection. The results further support the disputed claim that bilateral agreements are actually implemented in domestic legislation.

Once a FTA is reached, coercive pressure becomes more relaxed. The WTO agreements led to a decline—although delayed—in the effectiveness of coercive instruments and the United States neither used the Special 301 nor the GSP review against any of its recent FTA partners in the years following the signature of an agreement. Thus, as hypothesized, contractualization takes over in effectiveness from coercion. As the next sections illustrate, however, contractualization does not operate in isolation.

H2: The Positive Effects of the Other Mechanisms on the *Transplant Index*

Our quantitative analysis provides strong evidence that both regulatory competition and socialization contribute significantly to a country's *Transplant Index* score. First, the positive and significant effect of the *Regional Top Score* on the *Transplant Index* in both 1995–1999 and

TABLE 2. The Influence, Strength, and Rank of Variables on the *Transplant Index*, Full Period (Fixed Effects)

Variable	Coefficient (1566 observations; 116 groups)		Rank of Strength
GDP per Capita	0.00015***		2 (3.71%)
Priority Watchlist	0.313		7 (0.33%)
GSP Review	–0.393		6 (0.43%)
US Bilateral Agreement	1.948***		1 (4.19%)
IP Training	0.012***		4 (2.75%)
Pop. Studying in US	0.444***		3 (3.27%)
Regional Top Score	0.221***		5 (2.54%)
R^2	0.53		
$F_{7,115}$	25.98***		

(Notes. *Significant at ≤ 0.05 ; **Significant at ≤ 0.01 ; ***Significant at ≤ 0.001 .)

Ranking is based on the proportion (in parentheses) of within-country variation in the index uniquely explained by the predictor in question, measured using the Stata 12 semipartial R^2 statistic.)

2000–2008 in Table 1 and during the full period of 1995–2008 in Table 2 provides support for the role of regional competition in facilitating the adoption of US-style IP rules. It suggests that when a country moves its IP protection closer to that of the United States, its neighbors try to catch up, most likely in the hope of avoiding the flight of capital or to remain attractive for further FDI. It is unlikely that they would have done so otherwise, considering their level of economic and technological development.

Second, the regression analysis suggests that socialization mechanisms have a strong and positive effect on a country's *Transplant Index* score. Table 1 shows that both *Population Studying in the US* and *IP Training* are significantly associated with increases in the *Transplant Index* in both the 1995–1999 and 2000–2008 periods. Table 2 not only confirms this over the entire 1995–2008 period but shows that the combined socialization variables (that is, adding *IP Training* and *Population Studying in the US*) out-rank every other mechanism in terms of strength.

This finding on the power of socialization to increase levels of IP protection supports existing case studies. According to an Oxfam study, the Guatemalan congress increased the level of IP protection beyond the minimal requirement of the TRIPs agreement under the guidance of US-funded legal advice (Oxfam 2002:9). Further case studies have documented a similar impact of IP capacity-building programs in other states such as Thailand, the Philippines, Nigeria, and West African countries (Deere 2009; Drahos 2010). Our quantitative analysis suggests that these cases are not deviant, but representative of IP socialization in developing countries.

To the extent that GDP per Capita captures emulation—as this variable picks up other factors, we refrain from making stronger claims—the regression analysis is consistent with our assumption presented earlier that, while emulation is sometimes at work in facilitating the transplantation of US-style IP rules, it is far from the primary explanation of those transplantations. For example, GDP per Capita did not reach significance in the 1995–1999 period in Table 1. On the other hand, GDP per Capita took on significance once socialization, regional competition, and contractualization took hold. This is illustrated not only in the significance of its effect in the 2000–2008 period in Table 1, but in its overall strength in the full model in Table 2, where it is third to contractualization and socialization (combining the strength values of *IP Training* and of *Population Studying in the US*). One interpretation of these findings—subject to the same caveat above—is that by 2008, socialization had become so effective as to reduce developing countries' *perceived* asymmetries with the United States. Thus, those countries would consider emulating higher IP rules under the belief that those rules were as appropriate for them. This would account for both GDP per Capita's lack of significant effect in 1995–1999—during which asymmetric interests were top of mind—and its significant effect in 2000–2008 when those asymmetries had lesser visibility. This result adds subtlety to previous studies in which GDP per Capita had been examined in isolation from the other variables studied here (Chen and Puttitanun 2005).

H3: Interrelationship Between Contractualization, Socialization, and Regulatory Competition

Our analysis provides partial support for the third hypothesis that each of contractualization, socialization,

and regulatory competition are more prominent in the presence of the others, leading to a self-reinforcing cycle of transplantation of US-style IP rules.

First, regression analyses—the results of which are illustrated in Table 3 below—suggest that the signing of a FTA leads to an increase in the volume of US-sponsored *IP Training* events directed at the country. It remains unclear whether it is the FTA itself that directly induces US training providers to increase their domestic presence, or whether the FTA acts to indirectly convince domestic authorities to welcome US offers of training in order to more aggressively attract FDI. In either case, a FTA seems to increase socialization opportunities.

The regression analysis also illustrates the symbiotic relationship between contractualization and regional competition. Indeed, Table 4 below shows a peak in competitive activity in 1998–2000. This was the time that most countries were revising their laws to meet the 2000 deadline for developing countries to implement TRIPs within their domestic legal frameworks. Once those countries engaged in the process of revising their IP laws, they apparently took the opportunity to strategically position their IP rules so as to be competitive with others in the region, often surpassing the requirements of TRIPs. In the 1998–2000 period, *Regional Top Score* is one of only two variables (the other being *Population Studying in the US*) that is significantly associated with the *Transplant Index* and its effect is markedly stronger than all other mechanisms put together. Thus, it seems that the contractual obligations set out in TRIPs provided a platform for jockeying for strategic advantage through further increases in the level of IP protection. Countries used the premise of contractualization to engage in competitive rule-making.

In turn, developing countries seem to compete to secure a contractual agreement with the United States. Decisionmakers may believe that a FTA with the United States would make their countries more attractive for FDI and boost their exports. As a result, several developing countries now seek to enter into FTA negotiations with the United States, despite knowing that they will be required to comply with unfavorable IP provisions that they likely would have rejected in a different context. Tellingly, once the United States signs a FTA with a country, that country's neighbors often indicate an interest in signing a similar agreement. The Canada–US agreement of 1989 famously prompted Mexico to propose to the United States the negotiation of a similar FTA, which became trilateral at the request of Canada, providing the United States with an opportunity to diffuse its IP rules across all of North America. Likewise, in 1994, Trinidad

TABLE 3. The Influence of Variables on Intellectual Property (IP) Training (Fixed Effects)

<i>IP Training (1694 Observations; 121 Groups)</i>	
<i>Variable</i>	<i>Coefficient</i>
GDP Per Capita	0.004***
Priority Watchlist	14.954***
GSP Review	0.107
US Bilateral Agreement	22.485**
Pop. Studying in US	5.935***
R^2	0.27
$F_{5,120}$	16.92***

(Notes. *Significant at ≤ 0.05 ; **Significant at ≤ 0.01 ; ***Significant at ≤ 0.001 .)

TABLE 4. The Influence and Strength of Variables on the Transplant Index for 1998–2000

(331 observations; 112 groups)		
Variable	Coefficient	Rank of Strength
GDP Per Capita	−0.0001	4 (0.22%)
Priority Watchlist	0.068	5 (0.03%)
GSP Review	0.093	5 (0.03%)
US Bilateral Agreement	<i>Dropped</i>	<i>Dropped</i>
IP Training	0.016	2 (1.51%)
Pop. Studying in US	0.173*	3 (0.55%)
Regional Top Score	0.491***	1 (7.36%)
R^2	0.16	
$F_{6,111}$	5.53***	

(Notes. *Significant at ≤ 0.05 ; **Significant at ≤ 0.01 ; ***Significant at ≤ 0.001 .)

²Ranking is based on the proportion (in parentheses) of within-country variation in the index uniquely explained by the predictor in question, measured using the Stata 12 semipartial R^2 statistic.)

and Tobago concluded a bilateral IP agreement with the United States to avoid marginalization after a fellow Caribbean country, Jamaica, signed an investment treaty with the United States (Heron 2004). More recently, the Dominican Republic requested to join negotiations between the United States and central American countries, which included a chapter on IP, in order to maintain an access to the US market that was equal to that of its central American competitors (GAO 2004:12).

As the United States can essentially select the countries with which to enter into a FTA, developing countries interested in acquiring a FTA must present themselves as reliable partners. In this context, offering a relatively high level of IP protection, even before FTA negotiations begin, could be a strategy for countries that aspire to a FTA, particularly if the IP changes would be required by the FTA in any case. The Dominican Republic increased, for example, its IP protection when it had difficulty convincing the United States to let it join ongoing negotiations with central American countries (GAO 2004:44–45). Similarly, Taiwan duplicated some US standards with the explicit hope that those reforms would facilitate negotiation of a full-fledged FTA (Smith and Rugaber 2002). Noticing those behaviors, the US government concluded that its “willingness to pursue bilateral FTAs has bolstered countries’ interest [in adopting US-style IP rules] and encouraged them to make the changes necessary to enter into FTA negotiations” (GAO 2004:11).

Socialization can lead, in turn, to a re-evaluation of past trade concessions in light of newly acquired norms: Increases in IP protection may no longer be seen as compromises but as independently beneficial. Under this perspective, increased socialization, generated as a result of contractualization, can favor further rounds of contractualization. Tellingly, the United States Agency for International Development noted that capacity-building programs on IP can “increase readiness to enter into free trade agreements” (USAID 1998:4). Although a regression analysis cannot provide causal evidence to support this claim, it should be noted that several American FTA partners that were previously not known for advocating strong IP protection, including Jordan, Korea, Mexico, Morocco, Singapore, and the United Arab Emirates, have since joined the United States in the small group of countries that negotiated the Anti-Counterfeiting Trade Agreement (ACTA), a multilateral agreement providing

high standards of IP enforcement. While those countries may also hope to receive contractual benefits in other fields, they already enjoy free access to the US market and one of the few plausible explanations for their participation in the ACTA negotiations is that a greater share of their socialized elite came to believe that IP protection is beneficial for their societies.

Just as the boundary between coercion and contractualization is blurred, so too are those separating the activities of contractualization, socialization, and regulatory competition. Table 1 shows, for example, that socialization and regional competition operated in 1995–1999, during the period in which coercion was in decline, but prior to the post-TRIPs contractualization wave. Both continued once contractualization started. This complex interrelationship among the mechanisms illustrates the limits of any theory that does not address multiple mechanisms at once.

Conclusions

This article contributes to the literature in a number of ways. It bridges the so-far unconnected literatures on legal transplants and policy diffusion by combining systematic legal comparisons with political causal explanations. It also articulates one of the first integrated understandings of the five discussed causal mechanisms, enabling a more complete and complex picture of the process of legal transplantation in the context of asymmetric interests.

Furthermore, this article introduces an original and much needed index of IP protection, the *Transplant Index*, and a new indicator of regional competition, *Regional Top Score*. Our models, based on this index, provide strong empirical evidence—corroborating anecdotal examples in the literature—of (i) the declining effectiveness of coercion, (ii) the actual legal implementation of bilateral agreements, (iii) regional races to the top in IP standards setting, and (iv) the impact of US-sponsored capacity-building activities on domestic legislation.

Three main conclusions follow from our findings. First, several causes can produce a similar effect. This amounts to a truism of social science, but scholars sometimes forget it in the context of quantitative analyses. As Dobbin et al. (2007:463) conclude in their review of the policy-diffusion literature, several researchers “test only their own theory or simply show evidence of diffusion and impute that their favored mechanism is at work.” This article demonstrates, in contrast, the significant contributions of combining several causal mechanisms.

Second, acknowledging multicausality does not mean that the different causal mechanisms operate simultaneously, equally, or independently. Rather, this article suggests that the mechanisms of legal transplantation are historically conditioned. Power structures, the ideational environment, and the institutional context condition the availability of mechanisms and their ability to facilitate the process of legal transplantation. Coercion, for example, while an effective tool for the United States in the early 1990s, became less effective after the implementation of WTO agreements.

Third, this article highlights how different causal mechanisms interrelate with one another. While each of the mechanisms studied may achieve a similar result, this does not imply that they are mere substitutes for one another, deployed according to the tastes of more powerful coun-

tries; rather, the mechanisms act in concert with one another and achieve maximum effect when combined in particular sequences so as to collectively drive continuous legal transplantation. For example, contractualization favors both regulatory competition—especially among FTA candidates—and socialization—through increased training programs. One possible effect of the sequencing of these mechanisms is that elites in developing countries may become so socialized to US norms that they cease to perceive the asymmetry of interest with the United States. Should this occur, the scope condition of this study—asymmetric interests—may lift, leading to a greater role for emulation. As the discussion at the end of hypothesis H2 suggests, this may actually be happening.

Although a study of counter-hegemonic resistance exceeds the scope of this article, we note that both state and nonstate forces—in both developed and developing countries—resist the dynamic of legal transplantation (Morin 2014). In the past, those forces obliged the US government to change its strategy from coercion to contractualization. More recently, they may have forced Washington, along with some European governments, to pause the continuous expansion of IP protection within their own domestic systems. Nevertheless, these counter-hegemonic forces seem unable, so far, to reverse the current dynamic toward greater levels of legal transplantation of IP rules in developing countries.

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Supporting Information

Additional Supporting Information may be found in the online version of this article:

- Appendix S1.** Full dataset.
- Appendix S2.** Robustness and error distribution.
- Appendix S3.** Sample.
- Appendix S4.** Transplant index by country per year.
- Appendix S5.** Variable definitions and data sources.
- Appendix S6.** Variable test.