

Contentious
Implementation and
Retrenchment in
Neoliberal Policy
Reform: The Global
Electric Power Industry,
1989–2001

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We develop theory about the effect of domestic and global institutional forces across countries and over time, following a national government's adoption of a globally diffusing policy, on retrenchment—the degree to which a government reinstates the objectives of a policy's predecessor without repealing the new policy to balance conflicting institutional forces. World political culture legitimates and supports the new policy, while the policy's domestic opponents seek to mobilize opposition to it. Peer country governments' behavior and intergovernmental organizations may help or hinder domestic opponents' efforts. We tested our model by examining governments' renegotiation of the terms of private electricity generation projects in 62 countries in 1989–2001. Although no country formally repealed electricity liberalization during that period, governments selectively renegotiated the terms of private investment in roughly 20 percent of private power generation projects in countries that liberalized. Results support our hypotheses about the effects of domestic and global institutional forces—the former of which we measure through automated natural language parsing of 8.52 million newspaper articles—and the idea that domestic audiences' preexisting cognitive constructs and normative beliefs shape governments' implementation of globally diffusing policies. ●

World polity research has traditionally emphasized the global legitimacy pressures leading national governments to adopt similar public policies (for a review, see Dobbin, Simmons, and Garrett, 2007). In areas such as education reform (Meyer et al., 1977), human rights policy (Boli and Thomas, 1997), and women's suffrage rights (Ramirez, Soysal, and Shanahan, 1997), empirical studies have linked proxies for the incorporation of specific principles and policies into world political culture to individual governments' policy adoption decisions, providing indirect evidence of isomorphic influences operating through policymakers' perceptions about national identity. Relational influences further promote the adoption of similar policies: a country's ties to other global actors sensitize policymakers to the behavior of peer governments and the demands of powerful organizations that support a given policy (Strang and Chang, 1993; Boli and Thomas, 1997; Lee and Strang, 2006; Koo and Ramirez, 2009). Empirical studies in areas such as neoliberal macroeconomic policy reform (Fourcade-Gourinchas and Babb, 2002), market-oriented infrastructure reform (Henisz, Zelner, and Guillén, 2005), central bank independence (Polillo and Guillén, 2005), public sector downsizing (Lee and Strang, 2006), bankruptcy law (Carruthers and Halliday, 2006), and the rationalization of national governance (Drori, Jang, and Meyer, 2006) support this contention, providing evidence of normative, mimetic, and coercive pressures that operate through such ties.

Recent studies have expanded earlier world polity research's central focus on the role played by global institutional forces to more closely examine how such forces interact with country-level factors to affect a government's decision to adopt a globally diffusing policy (Cole, 2005; Paxton, Hughes,

and Green, 2006; Quinn and Toyoda, 2007), and also by considering the extent to which the forces associated with adoption affect the degree to which a policy is actually implemented or the conditions under which it may be reversed. Research in this vein combines elements of an institutionalist perspective with those of a realist perspective in which competition and cooperation among actors shape the world system (Gilpin and Gilpin, 2001). For example, Hafner-Burton and Tutsui (2005) and Avdeyeva (2007) both studied the delayed implementation of a globally diffusing human rights treaty that national governments adopted but initially failed to implement as the result of domestic pressures; only when global legitimacy pressures grew strong enough did implementation finally occur. Quinn and Toyoda (2007) and Weber, Davis, and Lounsbury (2009) examined global coercive pressures that were insufficient to fully overcome incongruent local conditions, resulting in reversal or incomplete implementation of capital account liberalization and stock market creation, respectively. In the context of education policy, Ramirez (2006) observed that cross-national and ethnic diversity result in contested terrain—such as the amount of time devoted to learning about national language and culture—surrounding the globally institutionalized domain of education as an instrument for transforming the masses into national citizens. Additionally, comparative case studies of financial (Halliday and Carruthers, 2007) and labor and environmental regulation (Bartley, 2007) have depicted policy implementation as a recursive process in which global norms and actors interact with, influence, and are influenced by domestic actors in the period following a policy's adoption.

These efforts notwithstanding, world polity research has remained largely silent on the role that domestic and global institutional forces—which continue to ebb and flow following a policy's enactment and whose structure and impact vary by country—play in the politically contentious domestic implementation of a globally diffusing policy. We attempt to fill this gap by developing a model of political contention that identifies the conditions under which a government may choose to retrench in its implementation of such a policy (Soule and Zylan, 1997; Zylan and Soule, 2000) by selectively reinstating prior policy objectives without repealing the new policy. Consistent with the case studies described above and the broader theoretical model outlined by Meyer et al. (1997), we view implementation as an ongoing sociopolitical process, in which the domestic proponents and opponents of a globally diffusing policy continue to struggle against each other in the period following a government's enactment of the policy. The specific focus of contention is the conflict between the values and objectives embodied in the newly adopted policy, which reflect the current world political culture, and those embodied in the policy that the new one has replaced, which reflect the established domestic political culture.

The period following enactment represents a window of political opportunity for the new policy's staunchest domestic opponents because, as a result of its novelty, the policy is still subject to explicit evaluation by broader domestic audiences on which the government relies for support (Henisz and

Zelner, 2005). Opponents pit old against new in a frame contest (Benford and Snow, 2000), highlighting the policy's incompatibility with the values and objectives embodied in its predecessor (Henisz and Zelner, 2005). If the new policy fails to gain legitimacy among a large enough range of domestic audiences, or if broader domestic political conditions facilitate opponents' efforts, the government faces increased pressure to abandon the policy. At the global level, supportive cues and pressures from relevant actors on the world stage may also shift or recede, reducing the government's commitment to the new policy and further broadening the political opportunities available to opponents. At the same time, policymakers' perception that the policy is a legitimating element of nationhood—along with their reluctance to bear the costs of formal repeal (Martin, 1993; Fearon, 1997) and the supportive efforts of the new policy's beneficiaries—create continued pressure to maintain the policy. Under these circumstances, retrenchment serves as a means for the government to balance (Oliver, 1991) conflicting institutional forces. We test hypotheses about specific institutional forces associated with contention and retrenchment by analyzing the incidence of government renegotiation of private electricity supply contracts around the world during the period 1989–2001, the era of greatest ferment in the recent wave of neoliberal electricity reform.

CONTENTIOUS IMPLEMENTATION AND RETRENCHMENT

Governments may enact globally diffusing policies to address performance shortfalls whose resolution they perceive as necessary to maintain legitimacy in front of the domestic audiences on which they rely for support. Uncertainty about the most technically appropriate solution renders policymakers especially attentive to policy prescriptions theorized by global elites. Prior adoption by peer countries, especially successful or legitimate ones (Lee and Strang, 2006), and the demands or expectations of resource providers (Strang and Chang, 1993; Meyer et al., 1997) may create added pressures to adopt a specific policy to maintain global as well as domestic legitimacy.

Recently enacted policies lack widespread domestic acceptance by virtue of their novelty and possible inconsistency with the values and objectives embodied in the policies they replace. As a result, they undergo explicit evaluation by uninformed or ambivalent domestic audiences. The staunchest opponents of a new policy, having failed to mount sufficient opposition to prevent the policy's enactment in the first place, now lobby the government to repeal the policy and attempt to mobilize those audiences to play an intermediary role. A common tactic for doing so is to invoke the political objectives served by the policy's predecessor, calling the new policy's legitimacy into question (Henisz and Zelner, 2005). The success of such efforts (Hilgartner and Bosk, 1988; Benford and Snow, 2000), in turn, depends on the structure of domestic political opportunities—shaped by stable elements such as belief systems and volatile elements such as divisions and alliances among elites (Gamson and Meyer,

1996)—available to opponents (Diani, 1996; see also Tarrow, 1988; Gamson and Meyer, 1996).

Opponents' ultimate objective is formal repeal of the policy at issue. The government regards individual entreaties for repeal as cues about evolving societal perceptions of the policy, however, and may respond to these entreaties by initiating or supporting departures from formal rules and policy covenants. This pattern is especially pronounced for recently enacted policies because many domestic audience members' perceptions are still in flux. At the same time, the cognitive pressures stemming from the policy's theorization, promotion, and dissemination at the global level—ideational influences associated with the "world models" that affect all nation-states, regardless of network position or power (Koo and Ramirez, 2009)—continue to support the government's perception of the policy as a legitimating element of nationhood. Conflicting institutional forces operating at different levels may thus confront the government with "incoherence" (Meyer et al., 1997: 154, 172) reflecting "contradictions inherent in widely valued cultural goods." Retrenchment—as opposed to outright repeal—serves as a way to balance such opposing forces (Oliver, 1991).

The Global Electric Power Industry

National governments' selective renegotiation of the terms of private electricity investment illustrate the model of contentious implementation and retrenchment outlined above. Prior to the late 1980s, state ownership and operation of the electricity industry was the norm in most countries, having emerged following the Great Depression as a means of subsidizing the expansion of access. In many jurisdictions, however, industry performance had deteriorated markedly by the early 1980s as the result of decades of politically motivated supply, pricing, and employment practices. The reform model to which governments facing crisis conditions turned was the so-called "Washington Consensus" (Williamson, 2000), whose chief policy prescriptions included (among others) liberalization of state-owned infrastructure industries: the transfer of existing government-owned facilities into private hands or the private construction of new ones, to supply consumers at contractually or spot-market-determined prices (Henisz, Zelner, and Guillén, 2005; Jamasb, 2006; Williams and Ghanadan, 2006).

The Washington Consensus had its roots in a series of policy reforms that had begun in the 1970s, when governments around the world issued tax cuts, dismantled social welfare systems, and adopted other reforms that "celebrated market mechanisms and challenged the efficacy of government action" (Lee and Strang, 2006: 891). The global diffusion of such "neoliberal" policies, together with their theorization and promotion by influential actors as a solution to the perceived failings of the state-centered model (see Strang and Chang, 1993; Lee and Strang, 2006), fostered neoliberalism's development into a "nearly global policy paradigm" (Fourcade-Gourinchas and Babb, 2002: 533; see also Campbell and Pedersen, 2001). Thus by the late 1980s, when Chile and the U.K. initiated their neoliberal electricity reforms, beginning a

wave of such reforms by governments around the world (Gilbert and Kahn, 1996), the neoliberal creed had already had a profound effect on the “cognitive categories with which economic and political decision-makers . . . apprehend the world” (Fourcade-Gourinchas and Babb, 2002: 534; see also Centeno, 2007).

Relational influences further promoted the incorporation of neoliberal infrastructure policies into the expanding definition of nationhood. Multilateral lenders such as the World Bank and the International Monetary Fund (IMF) imposed such policies on borrower nations (Henisz, Zelner, and Guillén, 2005; Kogut and Macpherson, 2007), while private investors allocated capital to developing countries on the basis of countries’ compliance with neoliberal prescriptions (Biglaiser and DeRouen, 2006, 2007). Neoliberal electricity reform’s local validation (Johnson, Dowd, and Ridgeway, 2006) by the positive experiences of early adopters such as Chile and the U.K. (Gilbert and Kahn, 1996) and the support in many cases of local business consumers, who perceived large potential benefits from the electricity industry’s transformation (Murillo, 2001), further promoted the diffusion of neoliberal electricity reform.

It was against the backdrop of these events and the concomitant evolution of world political culture that many national governments in the last decade of the twentieth century enacted electricity liberalization policies. But domestic political contention over electricity liberalization did not stop with enactment: public sector labor unions, recipients of discontinued pricing subsidies, and other beneficiaries of the traditional state-centered model continued to resist liberalization, lobbying for the new policy’s repeal and the reinstatement of the state-centered model’s political objectives (Walton and Ragin, 1990; Campbell, 2004; Henisz and Zelner, 2005). The success of these efforts and consequent extent of retrenchment in a given country depended on the political opportunity structure available to liberalization’s opponents, shaped by domestic and global institutional forces.

Domestic forces. Domestic audiences’ prevailing normative belief structures and cognitive constructs represented perhaps the most enduring or “stable” (Gamson and Meyer, 1996) influence on the political opportunity structure available to liberalization’s opponents. Specifically, if members of these audiences viewed liberalization as “acting on collectively valued purposes in a proper and adequate manner” (Jepperson and Meyer, 1991: 50), they were more likely to ascribe “moral legitimacy” to the new policy on structural or categorical grounds (Scott, 1977; Zucker, 1986; Suchman, 1995: 581). In contrast, a conflict with normative belief structures, whether revealed directly in the policy’s consequences or through the framing efforts of opposed groups, increased the likelihood of broad opposition and subsequent retrenchment.

In the context of electricity liberalization, a key indicator of normative belief structures is domestic actors’ prevailing sentiment toward private enterprise. In nations in which such sentiment was favorable, private ownership and operation of infrastructure facilities that were once under the control of the

state were more likely to fit into a morally favored category (Suchman, 1995). In contrast, where sentiment toward private enterprise was negative, this sentiment was more likely to carry over to the assessment of electricity liberalization. And even where liberalization was associated with improved industry performance, it might still fail to attain moral legitimacy in the face of negative sentiment toward private enterprise because the assignment of positive moral value to “proper means and procedures” plays a role in normative evaluations regardless of outcomes (Berger, Berger, and Kellner, 1973: 53; see also Suchman, 1995).

Domestic audiences’ prevailing sentiment toward private enterprise also serves as an indicator of the cognitive constructs on which their members rely to understand the world around them (Scott, 2001: 53), including events such as globalization (Fiss and Hirsch, 2005). Structures resembling legitimate, familiar designs are more likely to gain acceptance in contests with established institutions (Hargadon and Douglas, 2001; Dacin, Goodstein, and Scott, 2002) because, in order to interpret new situations and construct responses, actors select from their set of existing understandings and actions (Hargadon and Douglas, 2001). New policies in particular are construed in accordance with “external cultural benchmarks and internalized interpretive processes” (Orr and Scott, 2006: 8). These internal accounts help determine the outcomes of “frame contests,” politically motivated attempts to influence meaning and, ultimately, policy outcomes (Lounsbury, 2001; Lounsbury, Ventresca, and Hirsch, 2003). Thus to the extent that domestic actors’ culturally influenced cognitive constructs rendered electricity liberalization policies more comprehensible or recognizable (Suchman, 1995; Scott, 2001), uninformed or ambivalent audiences were more likely to understand the nature and purpose of such policies and ultimately to accept them (Fox-Wolfgramm, Boal, and Hunt, 1998).

Hypothesis 1: Less favorable domestic sentiment toward private enterprise is positively associated with the incidence of retrenchment in recently adopted neoliberal electricity liberalization policies.

Volatile aspects of the domestic political opportunity structure—“matters of contention” not directly related to the specific policy at issue—also affected the scope of political opportunities available to liberalization’s opponents (Gamson and Meyer, 1996: 277–278; see also Gamson, 1988; Meyer, 1990). Specifically, opponents could exploit broader political conflict to gain political influence, either by playing an intermediary role in other disputed matters and eliciting political support in return or by working together with entrepreneurial political actors seeking to broaden their own base of support. This insight builds on classic arguments found in political process (Tilly, 1978; McAdam, 1982) and so-called breakdown theories (Piven and Cloward, 1977; Goldstone, 1980) of collective action and protest, which hold that protest groups are more likely to be accommodated during periods of elite disunity or upheaval. Tarrow (1996: 56) has expanded on this insight, arguing that “divisions among elites not only provide incentives for resource-poor groups to take the risks of collective action; they also encourage portions of the elite to

seize the role of ‘tribune of the people’ to increase their own political influence.”

National debates over electricity sector reform were especially susceptible to being incorporated into broader political conflicts. Virtually all domestic audiences consume electricity, and in most cases, these audiences had traditionally regarded public provision of subsidized electricity as a right. The rescission of this right provided ample opportunity for liberalization’s opponents both to contest the government’s legitimacy directly and to mobilize additional groups by linking electricity liberalization to other issues on the domestic political agenda.

Hypothesis 2: Broader domestic political conflict is positively associated with the incidence of retrenchment in recently adopted neoliberal electricity liberalization policies.

Global forces. Global forces as well as domestic ones affect the incidence of retrenchment. As discussed above, the perception of neoliberal electricity reform as a legitimating element of nationhood created pervasive pressure for governments to support such reform. Relational ties to other global actors—trade partners and competitors that had adopted neoliberal reforms, as well as powerful intergovernmental actors like the World Bank and the IMF—in many cases bolstered this cognitive pressure, as demonstrated in prior empirical research on the forces underlying the adoption of neoliberal electricity policies (Henisz, Zelner, and Guillén, 2005).

Such forces continued to operate following a national government’s enactment of electricity liberalization. Because the neoliberal creed continued to dominate global policy ideals through the turn of the millennium, the pressures that governments faced to maintain electricity liberalization policies as an element of national identity represented a stable influence on the scope of political opportunities available to both supporters and opponents of electricity reform. In contrast, the cues and demands transmitted through a country’s ties to other global actors, both peer governments and powerful intergovernmental organizations, varied by country and shifted over time as the result of changes in these actors’ behavior and in the strength of the ties themselves. Relational forces thus served as volatile elements of the political opportunity structure, facilitating or hindering opponents’ lobbying and mobilization efforts. Prior research on contentious politics has pointed specifically to the influence of such transnational networks on the political opportunities available to the domestic opponents of the global movement supporting neoliberalism (Tarrow, 2005).

One set of relational pressures is mimetic. In many policy domains, governments routinely draw social comparisons within the network of states (Coleman, 1988; Strang and Tuma, 1993), monitoring developments in other nations and emulating each other as a way to conform to shared norms and appear legitimate (Jepperson and Meyer, 1991; Van Rossem, 1996; Meyer et al., 1997). Prior research has argued that the intensity of trade relationships among countries

reflects the density of this network (Albrow, 1997: 25) and therefore the level of normative conformity within it. Trade comes hand in hand with cultural ties and thus contributes to “establishing a relationship of identification as well as interdependence” (Waters, 1995: 40). In the specific context of global policy diffusion, empirical studies have found that countries exhibiting more cohesive trade relationships are more likely to adopt similar policies (e.g., Henisz, Zelner, and Guillén, 2005; Polillo and Guillén, 2005; Elkins, Guzman, and Simmons, 2006; Simmons, Dobbin, and Garrett, 2006).

When governments that had enacted electricity liberalization policies observed retrenchment by peer governments that had also enacted such policies—departures from formal rules and covenants that were often well publicized—they were more likely to infer that electricity liberalization had elsewhere failed to solve the performance problems that had helped precipitate its enactment in the first place and thus likely to become more receptive to the demands of liberalization’s opponents. Observing retrenchment by peer country governments may also have led some governments to question their own social identity and join the defectors as a way of maintaining legitimacy (Rao, Monin, and Durand, 2003), both within their peer networks and among domestic audience members who look to peer governments’ behavior for reference.

Hypothesis 3: Retrenchment among closely tied trade partners is positively associated with a focal country’s retrenchment in recently adopted neoliberal electricity liberalization policies.

Mimicry may also occur in response to the behavior of competitors, in this case, a country’s competitors in trade (Burt, 1987; Van den Bulte and Lilien, 2001; Guler, Guillén, and Macpherson, 2002; Lee and Strang, 2006). Here, pressure to conform arises from the need to maintain market position among resource providers (DiMaggio and Powell, 1983) as well as social and political status (Van Rossem, 1996; Meyer et al., 1997). Within a given social structure, competing actors attend carefully to each other’s actions so as not to fall behind, especially in managing their mutual relations to others (Burt, 1987; Strang and Soule, 1998). In particular, governments that observed competing countries failing to enforce liberalization policies and reinstating the objectives of the state-centered model had greater latitude to respond to the demands of liberalization’s opponents, especially because departures from the neoliberal model were then less likely to threaten resource flows (Greve, 1995).

Hypothesis 4: Retrenchment among close trade competitors is positively associated with a focal country’s retrenchment in recently adopted neoliberal electricity liberalization policies.

Coercive pressures exerted by powerful global actors also influence national governments’ implementation of electricity liberalization policies. Prior studies have found evidence of coercive isomorphism (DiMaggio and Powell, 1983) in the influence of powerful countries and intergovernmental actors, such as the World Bank and IMF, on policy adoption by less powerful countries (e.g., Henisz, Zelner, and Guillén, 2005;

Polillo and Guillén, 2005; Kogut and Macpherson, 2007). More recently, in a study of the creation of national stock exchanges, Weber, Davis, and Lounsbury (2009) provided evidence that structures initially adopted in response to coercive pressures were unlikely to be fully implemented. Such pressures are likely to continue to evolve following a policy's enactment, influencing the likelihood of retrenchment.

Although coercive isomorphism constitutes a global pressure, its operative mechanism differs from that underlying mimicry, which involves substantive changes in the behavior of relevant peers. Although the norms espoused by the powerful global actors on which a country is dependent may in theory shift over time, the channel through which coercive pressures were more likely associated with retrenchment in our empirical context was a reduction in dependence on the World Bank and the IMF, multilateral agencies that lent financial capital to governments unable to borrow through conventional financial channels. These agencies required borrowing governments to agree to so-called "conditionality terms" requiring infrastructure liberalization and other neoliberal reforms (Henisz, Zelner, and Guillén, 2005: 875–876). We expect continued coercive pressures to have been positively associated with electricity liberalization's resistance to change, as the World Bank and the IMF monitored implementation, reducing governments' ability to retrench without reprisal. Conversely, we expect a lower level of indebtedness to multilateral lenders to have broadened the political opportunity structure available to liberalization's opponents, whose initial failure to defeat neoliberal electricity reform may have resulted in part from domestic supporters' alliance with multilateral agencies (Campbell, 2004: 179; Henisz, Zelner, and Guillén, 2005).

Hypothesis 5: A country's current level of indebtedness to multilateral lenders is negatively associated with retrenchment in recently adopted neoliberal electricity liberalization policies.

EMPIRICAL ANALYSIS

We tested the hypotheses by analyzing the incidence of government renegotiation in private electricity generation projects (974) involving foreign direct investment in all countries except the United States and Canada during the period 1989–2001, with data purchased from the consultancy Hagler-Bailly. Hagler-Bailly collected data on private electricity generating facilities in the United States and Canada in a separate database from facilities in the rest of the world. Data from the United States and Canada were more comprehensive, including far greater detail on the technological and environmental characteristics of each facility and, as a result, would have more than doubled the cost of our data purchase. Given our limited budget, we excluded these countries.

Although the United States, Germany, Japan, Belgium, Hong Kong, Luxembourg, and Suriname permitted substantial private investment in electricity generation prior to our sample period, and several other countries permitted privately generated power to be sold to state-owned utilities under specific circumstances—mainly when power was produced as the result of industrial cogeneration or when it was

produced by environmentally friendly technologies such as wind or solar—the investments that we examined took place following Chile’s implementation of the neoliberal model in its electricity industry and the U.K.’s first neoliberal electricity reforms. Virtually all scholars who have studied the recent history of the global electricity industry associate these events with the ascendance of neoliberal ideology in electricity policy around the globe (Gilbert and Kahn, 1996), an ideational movement reflected in the annual incidence of cross-border private electricity investments in our data, from two in 1989 to over one hundred new projects per year in the late 1990s. Because the incidence of such investments tapered off following the East Asian financial crisis in 1997–1998, our observation window encompasses the period of greatest ferment in the recent wave of neoliberal electricity reform. We included in our sample investments made into countries both with and without private investment prior to 1989 because the global pressures associated with neoliberal policy reform affected all governments. In 11 of the 94 countries that had enacted electricity liberalization by the end of our sample period in 2001, domestic opposition was sufficient to prevent any multinational private investor from entering the electricity generation industry; in an additional 31 countries, private investors entered and subsequently experienced retrenchment.

Our dataset is an unbalanced panel whose cross-sectional unit is a country and whose temporal unit is a year. The potential sample size is 670 country-years, reflecting the fact that some of the 83 countries represented in our data first permitted private power investment later than others. Missing data for some independent variables reduce the size of the estimating sample to 452 country-years, reflecting 801 projects in 62 countries. Analysis of the omitted cases reveals no systematic differences between the estimating sample and the population. Table 1 reports information on the number of private power projects in each country.

Dependent Variable

In the empirical setting that we examined, retrenchment took the form of government-initiated renegotiations of the terms governing private investment in electricity generation. We define retrenchment specifically as a drawdown of investor rights that effectively restores the political objectives of the state-centered model, but without formal repeal of the liberalization policy that replaced this model. Price reductions, which accounted for 70 percent of the cases in our data, provide the most vivid example because they directly restored cross-subsidies to their beneficiaries in the guise of an exceptional one-time intervention or alteration of the pricing scheme. Of the remaining cases, 15 percent involved governments’ reallocation of resources specified in contractual commitments to private investors (e.g., fixed-price fuel input supply contracts or electricity output purchase agreements) to other purposes with higher political returns (e.g., expanding social welfare spending during a recession or depression). The final 15 percent involved other forms of direct government intervention in the operations of a private facility (e.g., requiring the use of a particular fuel despite its uneconomic

Retrenchment in Policy Reform

Table 1

Private Power Generation Projects by Country

Country	No. of projects	Country	No. of projects
Antigua	1	Kenya	2
Argentina	34	Korea	4
Australia	27	Laos	2
Austria	2	Luxembourg	1
Hungary	6	Malaysia	15
Bahamas	1	Mali	1
Barbados	1	Mexico	16
Belgium	8	Morocco	3
Belize	1	Nepal	2
Bolivia	6	Netherlands	9
Brazil	42	New Zealand	9
Myanmar	1	Nicaragua	3
Cambodia	2	Oman	1
Sri Lanka	4	Pakistan	29
Chile	23	Bangladesh	6
China	101	Panama	8
Taiwan	9	Peru	10
Hong Kong	4	Philippines	49
Colombia	15	Poland	7
Costa Rica	9	Portugal	4
Croatia	1	Romania	2
Czech Republic	9	Saudi Arabia	1
Denmark	2	Senegal	1
Dominica	1	Singapore	2
Dominican Republic	7	Spain	24
Ecuador	6	Norway	2
El Salvador	2	Sweden	2
Finland	9	Tanzania	1
France	8	Thailand	35
Germany	20	Trinidad	1
Ghana	2	Tunisia	1
Guatemala	9	Turkey	23
Guyana	1	Ukraine	2
Honduras	4	United Arab Emirates	1
India	98	Egypt	4
Indonesia	42	United Kingdom	76
Israel	2	Ireland	3
Italy	40	Zimbabwe	1
Côte d'Ivoire	4	Fiji	2
Jamaica	7	Venezuela	7
Japan	18	Vietnam	5
Kazakhstan	8		

nature) that also served some political objective (e.g., assisting the fuel's owners or producers). Our dependent variable thus represents, for each country-year, the number of private electricity generation projects whose formal terms were changed by the government so as to reduce project investors' net revenue stream. Our coding of events is conservative because our measure captures changes severe enough to warrant press coverage only. Appendix A provides specific examples of text that reflects government renegotiations according to these criteria.

A large team of research assistants compiled this information by undertaking an exhaustive review of every press mention of every power project in our dataset in the several thousand media sources indexed in Factiva and the Lexis-Nexis energy industry data file, which includes more industry trade press coverage than Factiva does. This review was supplemented by additional investigation of each project using investors' corporate Web sites, other Internet resources, and prior research (Woodhouse, 2005). Validation of the coding of the dependent variable by the authors and a Ph.D. student indicated an intercoder reliability of .88 using Krippendorff's alpha and .90 using Cohen's kappa.

The dependent variable took a value of zero in 602 country-years and exceeded zero in 68 country-years. The mean incidence of renegotiations for a country-year was .293, with a standard deviation of 1.44 and a maximum value of 19. These figures reflect individual instances of renegotiation in 196 of the 974 projects in the data, or 20.1 percent of observed projects. This rate of renegotiation is consistent with the rate of renegotiations in private power projects reported by the World Bank (Guasch, 2004).

Independent Variables

Sentiment toward private enterprise. Hypothesis 1 related the incidence of retrenchment to domestic actors' preexisting sentiment toward private enterprise at the time of the first foreign electricity investment. Empirical measures of such constructs are relatively rare, especially for as many countries over as long a time period as we studied. Most extant research has used proxies related to broad dimensions of culture, such as individualism vs. collectivism, derived from social psychological research (Hofstede, 1980, 2003; Schwartz, 1994). A second body of research has used poll results from organizations such as the Latinobarómetro Corporation in Santiago, Chile, or Ronald Inglehart's World Values Survey (<http://www.worldvaluessurvey.org>). A third, smaller body of research has used content analyses of public discourse to construct relevant measures (Schneiberg and Clemens, 2006).

We build on this last body of research, conducting content analysis of press accounts to measure the prevailing sentiment toward private enterprise among domestic actors in a given country. One reason for doing so is the absence of cross-nationally comparable, time-varying poll responses that match our theoretical construct. More importantly, while much empirical neoinstitutional research has focused on structures and outcomes representing influences on and indicators of institutional change, discourse represents perhaps the most direct measure of national culture, which can be conceived as a system of contextually generated meaning (Barley, 1983) and, by some accounts, constitutes the very fabric of institutions and institutional change (Parker, 1992; Fairclough, 1995; Kress, 1995; Phillips, Lawrence, and Hardy, 2004).

A measure based on press accounts is especially appropriate for our research context because not all domestic actors

experienced equally or even directly encountered the effects of electricity liberalization. Instead, members of many audiences interpreted this practice—and behaved accordingly—through shared understandings that were “shaped and expressed through a collective public vocabulary” (Fiss and Hirsch, 2005: 29–30; see also Berger and Luckmann, 1966; Phillips, Lawrence, and Hardy, 2004). This vocabulary was reflected in and influenced by press accounts, which “organize the world both for journalists who report it and . . . for us who rely on their reports” (Gitlin, 1980: 7), and thereby facilitate the interpretation of new and historical events (Gamson et al., 1992: 38).

We constructed our discourse-based measure using a database constructed with the information extraction software described in Bond et al. (2003). Information extraction is a subfield of computational linguistics that combines “linguistics, the study of the form and function of languages, and computer science, which is concerned with any kind of data representation and processing that can be described algorithmically and implemented on computers. Information extraction is a constrained form of natural language understanding in which only pre-specified information is acquired from textual data” (King and Lowe, 2003: 238). To construct the database, the software was applied to the first sentence of all 8.52 million Reuters news stories published during the period 1990–2001. These sentences were tokenized, lexically processed, and syntactically analyzed to identify the subject, verb, and object of each sentence, as well as the geographic location of the event, as reported by Reuters. The resulting information was then coded into higher-level actor categories and event typologies using ontologies developed in conflict studies research during the past several decades.

Subjects and objects were aggregated into 121 sectors, such as “legislators,” “unions,” or “businesses,” which were further aggregated into 17 levels, such as “domestic social, religious, political, economic, military and business organizations,” or “intergovernmental organizations.” Events were similarly grouped into a 157-category hierarchical typology derived from the Integrated Data for Events Analysis (IDEA) protocol, which extended the Kansas Event Data System (KEDS) and is compatible with the World Events Interactions Survey (WEIS) and the Protocol for the Assessment of Nonviolent Direct Action (PANDA). These 157 event categories were then assigned an “affect” or “sentiment” value ranging from –12 (most negative) to +7 (most positive) using a modified version of Goldstein’s conflict-cooperation scale, as shown in Appendix B. For example, the strongly negative event “give ultimatum” received a sentiment score of –11, whereas the less strongly negative event “halt negotiation” received a value of –6. In contrast, the positive event of making an “optimistic comment” received a sentiment score of +2, and the strongly positive event “promise policy support” received a score of +6. In the sentence, “Mobs have attacked shops in Indonesia’s East Java province in a wave of fresh looting,” the subject is “mobs,” which was aggregated into the category “societal actors” (i.e., non-governmental actors); the object is “shops,” which was aggregated into the category “businesses”; and the event is “attack,” which

received a score of -12 because it is part of the broader event category "riot or political turmoil."

Computer-based coding schemes such as this one offer several advantages over human coding of text. First, they necessarily lead to a greater focus on objectively described (i.e., programmable or ontologically definable) events, as opposed to subjectively inferred (i.e., coder-specific) actor motives or assessments thereof. Second, adaptations to coding schemes or weights are more easily implemented because the coding schemes are hierarchical. Finally, and of special importance given the extremely large number of press articles used to construct our measure, machine coding is several orders of magnitude faster than human coding is. For example, Bond et al. (2003) reported that the 194,554 events reported for the country of India alone would take a single coder working 40 hours per week approximately 12 years to code, as compared with less than one day required for the software operating on a standard desktop computer. Importantly, the efficiency gains come with no significant loss of accuracy (King and Lowe, 2003; see also Schrodtt and Gerner, 1994).

We constructed our measure as follows. First, we identified all leading sentences in the 8.52 million Reuters new articles noted above in which private enterprise (i.e., any business organization) was the object. Next, we eliminated all sentences in which the subject was a government actor or another business. We then grouped the sentences by country and year and calculated the average sentiment score. Despite the large corpus of articles that we used, the number of sentences that met our sample criteria in some smaller or less heavily covered countries was limited. Thus for our final measure, we used a three-year historical average of a country's annual mean sentiment toward private enterprise. We took this average as of the year in which the first foreign direct investment in an electricity generating facility was recorded, to reflect relevant preexisting normative belief structures and cognitive constructs.

Using discursive output for this purpose presents three challenges that warrant mention. First, actors do not always explicitly reveal their cognitive frames or assumptions (Schneiberg and Clemens, 2006). For our measure, this observation might imply, for example, that the frequency of press mentions about attitudes toward private enterprise specifically would have been lower in countries in which market principles were taken for granted than it would have in countries in which such principles were the subject of explicit evaluation. But given that our measure is based on sentiment expressed toward individual organizations aggregated into higher-level categories, rather than toward the categories themselves, it is better able to reveal implicit beliefs, values, and norms than are discourse-based measures constructed using other techniques.

Second, traditional approaches to discourse-based analysis require researchers to have some basis for identifying what is representative (Schneiberg and Clemens, 2006). Here too, the technique used to construct our measure has an advantage

over more traditional approaches. Because our measure reflects country-level averages of sentiment scores based on every news article in the corpus of Reuters news stories during the period of analysis, we do not need to make any such judgments. At the same time, we acknowledge that our measure may reflect a different type of unrepresentativeness, in that it relies on English-language news articles rather than articles written in countries' spoken languages. Unfortunately, we are currently unable to correct for the bias that this might introduce, although future parsing engines could in theory operate with reference to the linguistic structure of the host-country language.¹

A third challenge associated with using discursive output to measure cognitive constructs involves the possibility that public discourse may reflect strategic behavior (Schneiberg and Clemens, 2006). The potential for such bias in our measure is limited by the fact that we did not assess sentiment expressed toward private involvement in the electricity industry itself, but rather toward private enterprise more generally just prior to the time of the first foreign investment. It is unlikely that this broader measure is significantly affected by strategic statements made specifically about the electricity industry or investors in this industry.

Political conflict. We used the same discourse-based approach to operationalize broad domestic political conflict, to test hypothesis 2. We identified all leading sentences in the corpus of Reuters news articles in which both the subject and object were political actors, which included any "candidate," "diplomat," "government agent," "judiciary," "litigation," "national executive," "political opposition," "political party," "royalty," or "sub-national official." We then grouped the sentences by country and year and calculated the average sentiment score, based on the scheme described above, for each country-year. We again used a three-year average of a country's political conflict, but in this case we used a three-year moving average for each country-year in our dataset, to reflect the volatility of this aspect of the domestic political opportunity structure. As compared with other measures of political conflict based on the number of riots, strikes, or assassinations, this measure has the notable advantage of capturing the tenor of discourse by political actors toward their peers, as opposed to subsequent manifestations such as violent protest events or actions, which are much less frequent. Furthermore, research in sociology and political science, the disciplines in which event-based measures originated, has largely discredited these other measures based on findings that cross-sectional and intertemporal variation in the number of recorded events is better explained by national norms of contention, the day of the week, and the presence of amplified sound at the event than by any relevant differences in the magnitude or incidence of conflict (Oliver and Maney, 2000; Woolley, 2000; Earl et al., 2004).

1

The task here is much more complex than translation, however, as the subject-verb-object triple must be correctly identified with a reliability approaching that of native human coders. At the current time, no available parser performs this function in languages other than English.

Emulation of trade partners. To test hypothesis 3, relating the incidence of renegotiation in a country to the incidence of renegotiation among the country's trade partners, we followed several recent studies (Guler, Guillén, and Macpherson, 2002; Henisz, Zelner, and Guillén, 2005; Polillo and Guillén,

2005) in constructing a “trade cohesion” measure that, for each country, assigns greater weight to the incidence of renegotiation in more closely tied countries. The weight assigned to the incidence of renegotiation in each of a given country’s trade partners is the share of the focal country’s total trade that trade with this partner represents. For each country-year, we summed the incidence of renegotiation by each of a country’s trade partners in that year, multiplied by the partner’s weight, to arrive at our final trade cohesion measure.

Mimicry of trade competitors. To test hypothesis 4, relating the incidence of retrenchment in a country to the incidence of renegotiation among the country’s trade competitors, we constructed a measure of “role equivalence” similar in spirit to our trade cohesion measure (see Guler, Guillén, and Macpherson, 2002; Henisz, Zelner, and Guillén, 2005; Polillo and Guillén, 2005). We define a country’s trade competitors according to the extent to which other countries compete in the same international export and import markets. For each country, we constructed a vector of the fraction of that country’s total trade accounted for by its trade in each of 34 different industries and then calculated the Pearson correlation coefficient between this vector and the analogous vector for every other country represented in our data set.² We used the resulting correlation coefficients as weights in our final measure. We calculated this measure for a given country-year by multiplying the incidence of renegotiation in every other country that year by the appropriate weight and then summing the resulting products.

Coercive pressures. To test hypothesis 5, relating the incidence of renegotiation in a country to its level of indebtedness to multilateral lenders, we measured indebtedness as the sum of a country’s total borrowing from the World Bank and the IMF to its gross domestic product (GDP). We obtained these data from the World Bank’s World Development Indicators database.

Other independent variables. In addition to the measures described above, we included several additional independent variables to capture other relevant economic and political influences. First, to capture changes in the performance of the electricity industry following liberalization, we included the percentage point change, since the year in which we first observed a country to have experienced private investment in its electricity industry, in the percentage of electricity lost between the generation and consumption stages (e.g., Czamanski, 1999). Second, we included the natural logarithm of a country’s real per capita income and the growth in per capita income, measured in year 2000 U.S. dollars, to account for the level of and changes in the level of economic development. We expected that, independent of our arguments about domestic legitimacy, the material interests of consumers and private investors in poorer, slower-growing countries were more divergent, which could have led to greater popular discontent with private power investment and thus a greater incidence of renegotiation. We obtained these measures from the World Bank’s World Development Indicators database. Third, to capture the influence of political checks and

2

Data on bilateral trade in the industry classifications necessary to compute these weights are available from Statistics Canada and were subsequently modified for use by Robert Feenstra and made available through the Center for International Data at the University of California, Davis (see Guler, Guillén, and Macpherson, 2002).

balances, which we expected to be negatively correlated with the incidence of renegotiation, we included Henisz's (2000) political constraints index, POLCON.

We also controlled for the time since the regulatory institutions and market structures associated with neoliberal reform came into existence, as we expected a greater number of interest groups to benefit from the maintenance and extension of long-lived reforms (Leblebici et al., 1991) and that reforms might start to become institutionalized over time. Thus we included a variable measuring the time since either (1) at least 10 percent of the generating capacity in a country was privately owned, or (2) a country adopted neoliberal regulatory reform in its electricity industry by making the regulatory authority statutorily independent.³ We also included a squared term for this variable to allow for the possibility of a nonlinear relationship (Lawrence, Winn, and Jennings, 2001). The sources used to construct this measure include the Hagler-Bailly dataset discussed above and information available from the International Energy Agency (IEA), which we supplemented with data from the Organisation for Economic Cooperation and Development (OECD), the International Regulation Database, the World Bank's *International Directory of Utility Regulatory Institutions*, and the Web sites of national regulatory agencies and ministries.

Additional independent variables include the average size of the generating facilities (in megawatts) in a country, to capture the visibility and thus the political salience of private electricity generation projects, and the degree of urbanization of the population and the level of inflation, which prior studies have found to be positively associated with resistance to international financial institutions' "austerity" policies (Walton and Ragin, 1990). Finally, we included the number of private power projects in place in a given country-year, which should be positively correlated with our dependent variable. To address concerns about reverse causality, we lagged all independent variables by one year. Table 2 provides descriptive statistics for our full estimating sample and the subsamples of country-years with and without renegotiations, as well as a correlation matrix for all variables.

3

As noted above, several countries permitted a limited amount of private investment in specific categories, primarily cogeneration and alternative fuels, prior to allowing private investment on a broader basis. We do not regard the allowance of such investments as representing neoliberal reform, but our data do not allow us to distinguish limited private sector involvement of this sort from the more broad-based private sector involvement of interest. Therefore, though we have chosen a threshold of 10 percent for the time-since-reform variable in our main specification, we have also replicated this specification using alternative variable definitions based on various thresholds ranging from 5 percent to 50 percent, as well as the specific criterion that 50 percent or more of the incumbent state-owned enterprise is under private ownership. The results obtained using these alternative variable definitions are consistent with the results that we report for our main specification.

Estimation Technique

Our econometric analysis must address several issues posed by the data. First, our dependent variable is an integer count that is highly skewed to the right and that has a variance that is necessarily correlated with its mean. Second, the multiple observations that we have on each country are not independent of each other. Third, because repeated observations on a given country are drawn from consecutive years, there may be autocorrelation as well.

The nature of our dependent variable dictates the use of a count model. More so than for many other models, debates about the appropriate methods for addressing unobserved heterogeneity and autocorrelation in a model for count data are highly spirited, without broad-based convergence on one technique. Specifically, the negative binomial model allows for overdispersion but is more sensitive to the underlying

Table 2

Summary Statistics and Correlations among the Variables

	1	2	3	4	5	6	7	8	9
<i>Full sample (N = 670)</i>									
Mean	0.29	8.84	2.19	60.61	24.90	4.64	8.73	6.59	0.55
S.D.	1.44	1.00	3.32	22.66	176.85	1.12	14.82	9.38	0.29
Min.	0	6.08	-14.29	9.38	-3.96	2.30	1.00	0.00	0.00
Max.	19	10.79	14.44	100.00	2947.73	7.60	101.00	40.00	0.89
<i>Retrenchment > 0 (N = 68)</i>									
Mean	2.88	8.50	1.87	54.54	11.01	4.96	24.87	6.69	0.55
S.D.	3.61	0.86	3.85	25.14	17.34	0.77	25.64	9.77	0.31
Min.	1	7.06	-11.14	10.32	-1.71	3.13	1.00	0.00	0.00
Max.	19	10.12	8.26	91.40	88.10	7.36	101.00	37	0.86
<i>Retrenchment = 0 (N = 602)</i>									
Mean	0	8.88	2.23	61.29	26.50	4.61	6.90	6.57	0.55
S.D.	0	1.01	3.25	22.29	186.61	1.15	11.76	9.67	0.29
Min.	0	6.08	-14.29	9.38	-3.96	2.30	1.00	0.00	0.00
Max.	0	10.79	14.44	100.00	2947.73	7.60	100.00	40.00	0.89
	10	11	12	13	14	15			
<i>Full sample (N = 670)</i>									
Mean	-0.26	-0.05	-1.47	0.16	0.01	0.06			
S.D.	3.43	1.35	0.53	0.27	0.02	0.10			
Min.	-26.41	-4.10	-4.50	0.00	-0.02	0.00			
Max.	11.99	3.00	0.60	2.95	0.12	0.69			
<i>Retrenchment > 0 (N = 68)</i>									
Mean	-0.64	-0.46	-1.29	0.20	0.01	0.05			
S.D.	3.51	1.54	0.46	0.23	0.02	0.05			
Min.	-9.69	-4.10	-2.75	0.00	-0.01	0.00			
Max.	7.88	3.00	-0.49	1.05	0.10	0.21			
<i>Retrenchment = 0 (N = 602)</i>									
Mean	-0.21	0.00	-1.49	0.16	0.01	0.06			
S.D.	3.42	1.37	0.55	0.28	0.02	0.11			
Min.	-26.41	-4.10	-4.50	0.00	-0.02	0.00			
Max.	11.99	3.00	0.60	2.95	0.12	0.69			
Variable	1	2	3	4	5	6	7	8	9
1. Retrenchment									
2. Log (per capita gross national income)	-0.11								
3. Log (growth in real per capita gross national income)	-0.09	.01							
4. Urbanization	-0.10	.77	-0.09						
5. Inflation (consumer price index)	-0.01	-0.04	-0.08	.05					
6. Log (megawatts)	.04	.20	.05	.22	.01				
7. Count of active (at risk) projects	.33	.02	.05	.00	-0.04	.09			
8. Years since supporting macro-level regulatory institutions in place	-0.05	-0.04	.06	-0.05	-0.08	.09	-0.03		
9. Political constraints index (POLCON)	.00	.53	-0.05	.40	.07	-0.08	.06	-0.02	
10. Change in industry performance (reverse signed)	-0.10	.16	.04	.08	-0.03	-0.05	-0.01	.11	.10

(continued)

Table 2 (continued)

Summary Statistics and Correlations among the Variables														
Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
11. Mean sentiment toward business at time of first foreign investment														
12. Political conflict	-.11	.25	.09	.17	-.37	.12	-.19	.09	.10	.14				
13. Trade cohesion-weighted peer government renegotiations	.09	.19	-.02	.11	-.02	.13	.21	-.01	.28	-.05	-.14			
14. Role equivalence-weighted peer government renegotiations	.06	-.16	-.10	-.14	-.06	.02	.07	.21	-.01	-.03	-.03	.00		
15. Multilateral exposure	-.02	.08	.11	.02	-.05	.10	.08	.01	.01	.00	.04	.03	.12	
	-.01	-.71	-.10	-.53	-.02	-.12	-.13	.10	-.37	-.24	-.12	-.20	.18	-.08

event generation process than the Poisson model is (Metcalf and Thompson, 2006). The Poisson model generates consistent coefficient estimates under a wider range of assumptions (Gourieroux, Monfort, and Trognon, 1984; Wooldridge, 1997) but is also based on the assumption that the mean of the dependent variable is equal to its variance (i.e., that there is no overdispersion), which is clearly not the case in our data. Fixed-effects estimators capture unobserved group-level (i.e., country-level) time-invariant heterogeneity, but at the expense of dropping all observations from groups with no events. Standard errors that are robust to group-level heteroskedasticity are available only for population-averaged estimators and, in the case of the panel Poisson model, for conditional fixed effect estimators. Finally, population-averaged estimators allow for autocorrelation, but at the cost of abandoning subject-specific effects.

Given the complex tradeoffs involved among these various techniques, we estimated all of the models described above and report as our primary specification the one that addresses the greatest number of relevant issues: a population-averaged panel negative binomial estimator with an AR(1) error structure and heteroskedasticity-consistent standard errors. The use of the population-averaged panel negative binomial as opposed to a population-averaged panel Poisson estimator is supported by a comparison of the QIC (quasi-likelihood under the independence model criterion) and QIC_u (quasi-likelihood under the unstructured model criterion) fit statistics for the two models. In our robustness analysis, however, we discuss the generally robust nature of our results across the various models.

RESULTS

Table 3 contains our econometric results. Model 1 shows results obtained using a population-averaged panel negative binomial estimator with an AR(1) error structure and heteroskedasticity-consistent standard errors but applied to a

Table 3

Econometric Results*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Log (per capita gross national income)	-0.786** (0.291)	-0.803** (0.297)	-0.780* (0.305)	-0.790** (0.298)	-0.916** (0.264)	-2.566** (0.370)	-0.797* (0.312)	-2.969** (0.344)	-3.019** (0.329)
Log (growth in real per capita gross national income)	-0.016 (0.059)	-0.021 (0.059)	-0.016 (0.060)	0.000 (0.058)	-0.015 (0.054)	-0.053 (0.039)	-0.019 (0.059)	-0.015 (0.031)	-0.023 (0.035)
Urbanization	-0.008 (0.011)	-0.006 (0.012)	-0.008 (0.012)	-0.004 (0.011)	0.001 (0.010)	0.005 (0.009)	-0.006 (0.013)	0.021** (0.007)	0.024** (0.008)
Inflation (consumer price index)	0.026** (0.010)	0.022* (0.009)	0.029** (0.010)	0.027** (0.009)	0.024* (0.010)	0.021* (0.009)	0.024** (0.009)	0.019* (0.009)	0.018 (0.010)
Change in industry performance (reverse signed)	0.106 (0.059)	0.117* (0.055)	0.122* (0.059)	0.113 (0.060)	0.129* (0.062)	0.125 (0.071)	0.134* (0.056)	0.146* (0.072)	0.202** (0.072)
Log (megawatts)	0.471** (0.149)	0.524** (0.155)	0.514** (0.155)	0.499** (0.151)	0.415** (0.160)	0.608** (0.164)	0.566** (0.161)	0.616** (0.188)	0.738** (0.186)
Count of active (at risk) projects	0.072** (0.008)	0.071** (0.008)	0.067** (0.008)	0.072** (0.008)	0.066** (0.008)	0.072** (0.008)	0.066** (0.008)	0.067** (0.008)	0.058** (0.008)
Years since supporting macro-level regulatory institutions in place	-0.121* (0.059)	-0.148* (0.065)	-0.109 (0.060)	-0.148* (0.059)	-0.11 (0.060)	-0.113 (0.059)	-0.136* (0.065)	-0.150** (0.054)	-0.166** (0.058)
Square of years since supporting macro-level regulatory institutions in place	0.003 (0.002)	0.004* (0.002)	0.003 (0.002)	0.004* (0.002)	0.003 (0.002)	0.003 (0.002)	0.004 (0.002)	0.003 (0.002)	0.004* (0.002)
Political constraints index (POLCON)	1.357 (0.803)	1.336 (0.853)	1.274 (0.790)	1.285 (0.769)	1.41 (0.821)	1.735** (0.633)	1.257 (0.841)	1.764** (0.653)	1.556* (0.611)
Mean sentiment toward business at time of first foreign investment, H1 < 0		-0.117 (0.090)					-0.12 (0.087)		-0.164* (0.078)
Political conflict, H2 > 0			0.573 (0.413)				0.578 (0.412)		0.881* (0.428)
Trade cohesion-weighted peer government renegotiations, H3 > 0				0.826* (0.361)				1.837** (0.494)	1.857** (0.465)
Role equivalence-weighted peer government renegotiations, H4 > 0					17.956* (7.432)			13.572* (6.116)	14.814* (6.689)
Multilateral exposure, H5 < 0						-24.152** (5.186)		-28.893** (5.850)	-29.748** (6.019)
Constant	2.13 (1.925)	2.039 (1.949)	2.714 (2.037)	1.733 (2.022)	2.757 (1.783)	17.192** (3.064)	2.625 (2.071)	19.493** (2.952)	20.640** (2.956)
QIC	908	362	872	922	848	797	361	727	271
QIC _u	10689	10140	10650	10700	10626	10587	10138	10517	10060

* $p < .05$; ** $p < .01$.

* Standard errors are in parentheses; 452 observations from 62 countries.

model containing only the economic and political control variables. In models 2–6, we sequentially add in one of the independent variables of theoretical interest. In models 7–8, we add the sets of independent variables measuring domestic and global pressures, respectively. Model 9 contains the results from our fully specified model, whose choice as the

primary specification is supported by the QIC and QIC_u model fit statistics.

Results for the control variables show that, as expected, deterioration in our aggregate performance measure (an increase in the amount of electricity lost between generation and final consumption) is associated with an increase in the incidence of renegotiation. Also, the incidence of renegotiation falls for country-years with higher levels of per capita income. Also consistent with our expectations, our results indicate that the incidence of renegotiation increases with the degree of urbanization, the average size of generating plants, and the total number of projects in a country. But there is no statistically significant association between the incidence of renegotiation and per capita income growth, and although the coefficient estimate on inflation is positive and significant in some of the models, it falls short of statistical significance in the fully specified model.

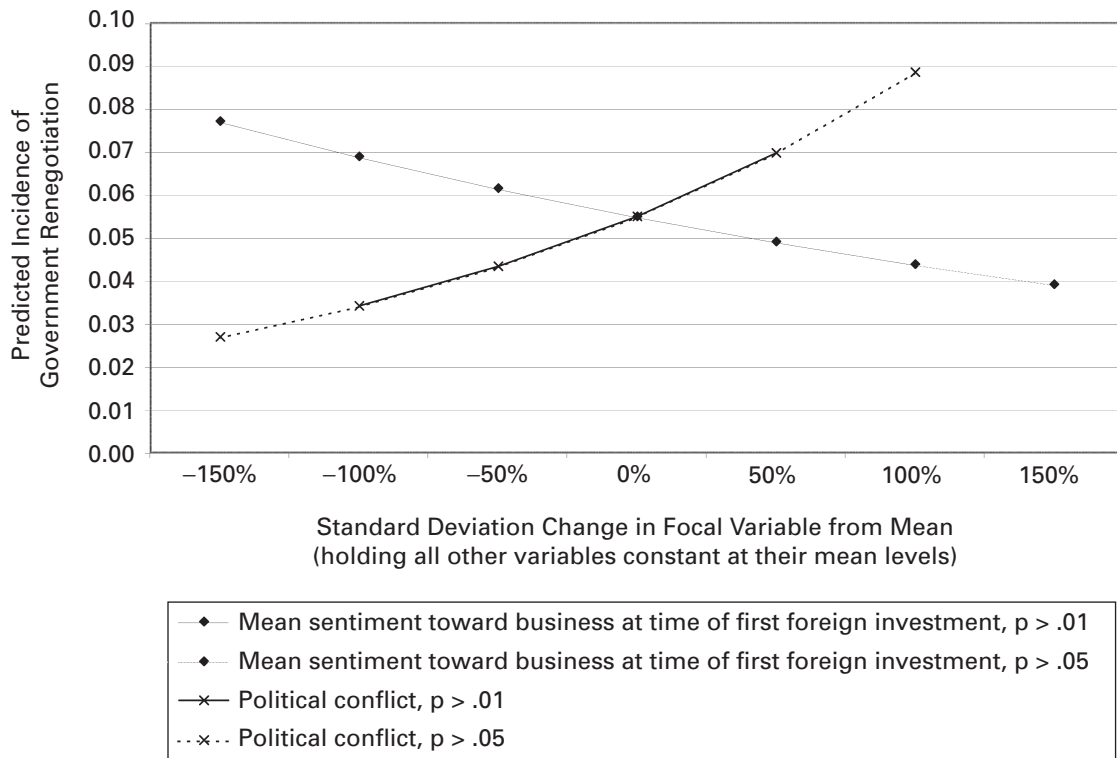
The estimated coefficients on the variables measuring years since initial reform and the square of years since initial reform are both statistically significant in the fully specified model. The coefficient estimates suggest that the incremental (negative) effect on the incidence of renegotiation of an additional year since the adoption of supporting regulatory structures or deployment of substantial private investment was more pronounced in the years immediately following the policy reform, and closer to zero in later years. Additionally, contrary to our expectation, the estimated coefficient on the level of host-country political checks and balances is positive and significant in our fully specified model, indicating that countries with more veto points in the policymaking process experienced a higher incidence of renegotiation. This counterintuitive result suggests that the effect of "voice" provided by additional veto points may have overwhelmed the constraints on policy change that veto points created (Frye and Mansfield, 2003).

Turning to the variables of theoretical interest, we find that, consistent with H1, the three-year average of public sentiment toward private enterprise at the time of the first observed private investment was negatively associated with the incidence of renegotiation. The estimated coefficient on this variable is statistically significant, and the substantive significance of this result is large. For the "average" country-year, a one-standard-deviation reduction in our sentiment measure is associated with a 25.3 percent increase in the predicted incidence of renegotiation, from .055 renegotiations to .069, as displayed graphically in figure 1.

Consistent with H2, our measure of political conflict was positively associated with the incidence of renegotiation. The estimated coefficient on this variable is also statistically and substantively significant. As shown in figure 1, for the "average" country-year, a one-standard-deviation reduction in political conflict is associated with a 37.9 percent decrease in the predicted incidence of renegotiation, from .055 renegotiations to .034.

Turning to our hypotheses about global forces, we find strong evidence that relational pressures emanating from the

Figure 1. Predicted effects of local pressures variables on relative incidence of renegotiation.

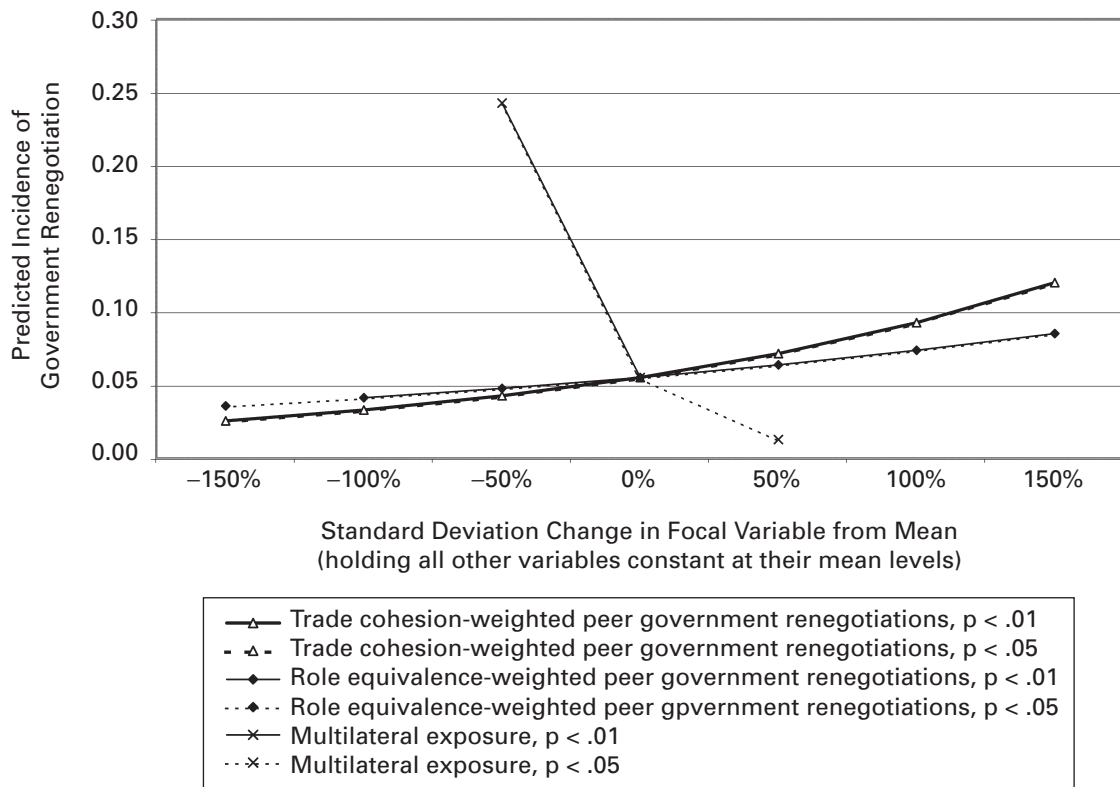


behavior of a country's trade partners were positively associated with the incidence of renegotiation by a focal country's government (H3). The estimated coefficient on our trade cohesion-weighted measure is signed as expected and statistically significant. As graphed in figure 2, for the "average" country-year, a one-standard-deviation increase in this measure is associated with an increase in the predicted incidence of renegotiation of 68.1 percent, from .055 renegotiations to .092.

We also find evidence that relational pressures emanating from the behavior of a country's trade competitors were associated with a higher incidence of renegotiation (H4). The estimated coefficient on our role equivalence-weighted measure is positively signed and statistically significant. Figure 2 shows that for the "average" country-year, a one-standard-deviation increase in this measure is associated with an increase in the predicted incidence of renegotiation of 33.7 percent, from .055 renegotiations to .073.

We find evidence that a country's indebtedness to multilateral lenders was negatively associated with the incidence of renegotiation (H5) as well. The estimated coefficient is signed as expected and statistically significant. As shown in figure 2, for the "average" country-year, a reduction in the level of indebtedness by only half of a standard deviation was associated with an increase in the predicted incidence of renegotiation of 441.3 percent, from .055 renegotiations to .24.

Figure 2. Predicted effects of global pressures variables on relative incidence of renegotiation.



Finally, the economic significance of these factors is super-additive. Domestic political conflict had a greater predicted effect on the incidence of retrenchment if public sentiment toward private enterprise at the time of reform was relatively unfavorable, peer countries had renegotiated, and the leverage of multilateral lenders was relatively low. In the hypothetical case in which public sentiment toward private enterprise is one standard deviation below the mean, political conflict is one standard deviation above the mean, trade-cohesion weighted and role-equivalence weighted peer negotiations are one standard deviation above the mean, and indebtedness to the International Monetary Fund and World Bank is zero (i.e., approximately one-half of one standard deviation below the mean), the predicted incidence of renegotiation rises 772 percent relative to the “average” country-year, from .055 renegotiations to .424.

Robustness

To assess the robustness of our results, we conducted several sensitivity tests, which we summarize below and whose full results are available upon request. First, as noted above, we examined the robustness of our analysis to the inclusion of random effects and conditional fixed effects using a panel Poisson model including an AR(1) error structure with robust standard errors (Wooldridge, 1999; Simcoe, 2007).⁴ Additionally, we converted our dependent variable into (1) a ratio of investments renegotiated to investments at risk and

⁴ In specifications using fixed effects, we replaced our time-invariant measure of sentiment toward business with the highly correlated contemporaneous measure.

(2) a binary indicator variable coded as one in the presence of any renegotiations, and zero otherwise, and respectively estimated panel tobit and probit specifications with an AR(1) error structure. The results of theoretical interest are consistent across all of these specifications, with the one notable exception being a loss of statistical significance for the domestic political conflict variable (H2) in specifications using conditional fixed effects, in which the sample size is reduced by more than half due to the exclusion of all countries in which no retrenchment occurred.

Second, we redefined our time-since-reform variable using alternative definitions based on various private ownership thresholds ranging from 5 percent to 50 percent, as well as the specific criterion that 50 percent or more of the incumbent state-owned enterprise had been transferred to private hands. None of the specifications using the alternative variable definitions produced results that differed substantially from those reported above. Our results are also robust to the exclusion from the estimating sample of all countries in which either of these thresholds was crossed or in which deregulation or the opening of the market was initiated prior to the start of our sample period.

Third, we included in several alternative specifications an ordinal measure reflecting the point in the global diffusion of neoliberal electricity reform at which a country adopted its first reform, which was highly correlated with our time-since-reform measure (the correlation coefficient is $-.66$). When we included this new variable, the signs and statistical significance of the estimated coefficients for the time-since-reform variable and the square of this term did not change.

Fourth, we rotated in several additional variables measuring specific attributes of a country's neoliberal reform program or the program's macroeconomic impact to see whether these affected the incidence of renegotiation. Because research in the field of political economy suggests that regulatory independence should be associated with lower corruption and improved industry performance (Edwards and Waverman, 2006), both of which might have influenced the incidence of retrenchment, we rotated in a dummy variable that takes on a value of one in country-years for which there is a statutorily independent regulatory authority. We also introduced several dummy variables measuring the degree of privatization of the state-owned incumbent electric utility.⁵ Additionally, because macro-level political institutions might also be expected to have affected the incidence of renegotiation, we rotated in several measures of democracy, including the 20-point Polity scale (available at <http://www.systemicpeace.org/polity/polity4.htm>), as well as dichotomous and trichotomous measures of democracy (as opposed to "other" or anocracy and autocracy). We also included the ideology of a country's current political leadership, based on the World Bank's Database of Political Institutions coding (right, left, nationalist, or agrarian). We tested as well for the effect of changes in political leadership, particularly to a more leftist or nationalist ideology, and included a direct measure of the government's role in the economy, the government's share of national

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One such variable indicated minority private ownership, a second indicated majority private ownership, and a third indicated full privatization. These variables were constructed using data compiled by the International Energy Association (IEA), supplemented with data from the Organisation for Economic Co-operation and Development (OECD) International Regulation Database, the World Bank's International Directory of Utility Regulatory Institutions, and the Web sites of national regulatory agencies and ministries.

output. Next, we considered the hypothesis that the initial conditions in some countries were simply too challenging for neoliberal reform to have a chance to succeed by including measures of income inequality, unemployment, ethnolinguistic fractionalization, and our discourse-based measure of political conflict in the initial year of reform. Finally, we examined whether macroeconomic performance, as measured by per capita income, unemployment, and income inequality, measured both annually and in the initial year of reform, affected our results. None of these alternative specifications produced results that differed substantively from those reported above.

The robustness checks described above focus on the possibility of measurement error or omitted variable bias. Next, we addressed the possibility that an alternative theoretical mechanism might explain the pattern of renegotiation we observed: that neoliberal infrastructure reform was a fad (Hill and Thomas, 2005) whose de facto reversal resulted from changing global fashions, as opposed to being a means of reinstating the suppressed objectives of the state-centered model. If neoliberal infrastructure reform were a fad, we would expect to observe a widespread wave of retrenchment (or abandonment) following a widespread wave of diffusion, which we did not observe. Moreover, even if not all adopters retrenched at the same time, the fact that we found a statistical association between the incidence of renegotiation and our measures of domestic forces (sentiment toward private enterprise and political conflict) casts further doubt on the fad hypothesis, as local pressures play no role in organizational accounts of fads (e.g., Abrahamson, 1991). Furthermore, we would also expect later adopters of a faddish policy to abandon the policy first (Rao, Greve, and Davis, 2001) or, in our case, to have retrenched first. But the insignificance of the ordinal measure reflecting the point in the global diffusion of neoliberal electricity reform at which a country adopted its first reform suggests otherwise.

To further test the fad hypothesis, we explored several possible alternative empirical specifications that would better fit this hypothesis, incorporating measures of global sentiment toward private enterprise, change in global sentiment, change in domestic sentiment, and the gap between domestic and global sentiment. Because there was no observable trend in the average global sentiment toward private enterprise during our sample period, we were not surprised to find that these variables were statistically and economically insignificant when added to our model and that their inclusion resulted in less favorable fit statistics. These results lead us to reject the proposition that neoliberal infrastructure reform was a fad. Furthermore, they challenge the stylized world polity model, in which global norms and beliefs have considerably larger explanatory power than domestic norms and beliefs do.

DISCUSSION AND CONCLUSION

The dynamic, contentious nature of the domestic policy implementation process in our model distinguishes our analysis from prior world polity research on policy diffusion. Such research either stops at a government's decision to

adopt a globally diffusing policy, implicitly assuming that implementation proceeds unhindered (Campbell, 2004: 78), or depicts a government as adopting the policy but failing to implement it in order to pursue conflicting domestic objectives (e.g., Weber, Davis, and Lounsbury, 2009). In contrast, in our analysis, the government is initially willing to suppress such objectives to solve a pressing performance problem, yet these objectives remain in play and become the subject of contention, as a sociopolitical struggle ensues over which goals public policy should seek to attain.

Our analysis contributes to research on policy diffusion by more closely examining how the influences at work following a diffusing policy's enactment affect outcomes at later stages (Campbell, 2004; Soule and King, 2006). We highlighted three key influences, each of which we believe represents an advance in world polity research. First, we theorized about how the prevailing normative belief structures and cognitive constructs among domestic audiences, especially uninformed or ambivalent ones, affect their understanding and evaluation of a newly enacted policy and thus their susceptibility to opponents' efforts to frame the policy as inconsistent with prevailing norms and beliefs. Although prior world polity research has recognized the role of national culture and belief systems in the adoption and implementation of globally diffusing policies (Castilla, 2004), our analysis of how these influence retrenchment is more systematic and permits us to provide evidence based on a large-sample empirical analysis using a novel, discourse-based measure of sentiment. Second, whereas prior research has considered intertemporal variation in the role played by the global drivers of policy reform—such as the incidence of international conferences or the stage of diffusion (Suárez, Ramirez, and Koo, 2009)—we considered how intertemporal variation in broader domestic political conditions influences the reform process. Finally, we demonstrated that, in contrast to the stylized world polity model, global pressures need not evolve unidirectionally, promoting homogeneity, but rather that pressures for homogeneity may ebb and flow over time, as the behavior of peer country governments shifts or the demands of powerful global actors recede, ultimately producing increased heterogeneity.

Our analysis also contributes to neoinstitutional research on institutional change more generally. Prior research has identified four possible outcomes following an innovation's diffusion: institutionalization; abandonment, which is often associated with fads; ceremonial adoption; and translation (for a review, see Greenwood and Hinings, 2006). We add a fifth possible outcome, retrenchment, and suggest that by considering the interplay of domestic and global institutional forces during a policy's diffusion process, it is possible to explain where a given outcome is most likely to be observed. Fads begin and end in response to global influences or technical criteria, with local political and ideational influences playing little or no role. Ceremonial adoption occurs in response to global influences, in conjunction with conflicting local objectives that are not suppressed. As discussed in detail above, retrenchment occurs when local objectives are initially

suppressed but are reinstated before institutionalization occurs. In this sense, retrenchment is closest to translation and perhaps represents a step along the way to this outcome and the cross-national heterogeneity associated with it.

At a broader level, our analysis relates to the current interest of some policymakers and academics in popular resistance to globalization policies and multinational investors. Multilateral lending agencies' policies are of special interest in this connection. Though these agencies may have as their ultimate goal the implementation of "pure" neoliberal reforms rooted in neoclassical efficiency criteria, our findings suggest that the long-term success of such reforms requires careful attention not only to economic influences but also to the domestic and global institutional context in which policymaking occurs. The experience of multilateral agencies in numerous countries has already shown that adverse or dramatic changes to industry employment, cross-subsidization patterns, price levels, and rural access—all of which may be a byproduct of efficiency-driven packages—can generate powerful societal resistance to reforms and undermine their legitimacy. A further policy implication is that domestic efforts to build legitimacy by meeting the equity objectives addressed by the traditional state-centered model of infrastructure ownership, albeit at great cost, may be necessary for neoliberal infrastructure reform to withstand the test of time and serve as an institutional replacement (Oliver, 1992). Furthermore, cross-national analyses of the welfare impact of neoliberal infrastructure reform that neglect the requisite institutional structures, as economists' analyses of the success of early adopters' reforms did, will overstate the benefits of reform, leading to erroneous policy recommendations to governments.

Limitations and Possible Extensions

Although we believe that our analysis contributes to several bodies of research, we also acknowledge its limitations. First, although our study speaks indirectly to the process of institutionalization (Zucker, 1977), our theoretical argument is set in a period after enactment but prior to institutionalization. We did not observe whether the policy that we examined—electricity liberalization—had attained taken-for-granted status in countries that enacted it. Thus it would be worthwhile to revisit the empirical context of our study over a broader time period to examine the proposition that as liberalization policies acquire greater legitimacy among domestic audiences, the influence of the forces that we identified here may subside.

Our large-scale quantitative analysis also did not allow us to capture certain influences and outcomes as directly as a comparative case design would, such as the specific mechanisms that supporters and opponents of electricity liberalization use to lobby policymakers and mobilize others (Henisz and Zelner, 2005) and the full range of possible policy outcomes. Future research might attempt to do so and also to identify contexts in which the relative importance of economic, ideational, and political forces at both the domestic and global levels can be compared.

In addition to calling attention to these specific topics for future research, we also note a more general opportunity.

There are many potential applications in organizational research of the natural language parsing technique that we used, as this technique can be readily employed to measure sentiment toward a wide array of concepts and objects. Moreover, the textual data parsed need not take the form of press reports but may consist of blogs, internal correspondence, congressional testimony, or any other form of relevant discourse available in electronic format.

Finally, retrenchment in neoliberal electricity reform has occurred in tandem with a broader global wave of retrenchment in and, in some cases, outright abandonment of a range of neoliberal economic policies. The model of contentious implementation and retrenchment developed here should help illuminate these events, and a broader analysis that jointly considers multiple outcomes—ceremonial adoption, translation, retrenchment, or abandonment—in multiple interrelated policy areas should, in turn, provide further insight into the policy reform process. The practical payoff of this stream of research will ideally be a set of tools that policymakers can use to pursue favored objectives while recognizing dramatic differences in the institutional forces affecting modern nation-states.

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APPENDIX A: Examples of Text Coded as Renegotiation

Tractebel's 1996 Renegotiation in Hungary

"Sparks are flying between the Hungarian government and foreign investors in the country's newly privatized electricity generation and distribution sectors. Belgium's Tractebel, Electricite de France (EdF), and Bayernwerk of Germany are threatening legal action after Gyula Horn's ruling social democratic party rejected the Hungarian energy office's proposals for a 40% increase in electricity prices effective from October 1 1996. . . . The Hungarian government's decision to delay the price increases is a result of economic and political tensions. 'The Hungarian government feels under pressure from a population unhappy at the tight economic and fiscal measures they have been subjected to,' says a Budapest-based diplomat. 'There is also a move from within the ruling party's own ranks for it to reassert itself as the party of the people rather than the party of foreign investors'" (*Central European Magazine*, October 1, 1996, p. 18).

Malaysian Renegotiations in the Aftermath of the East Asian Financial Crisis

"Once it became clear that the IPP contracts were causing serious strain on Tenaga's [the national electric utility's] profitability, Tenaga began attempts to renegotiate the long-term supply contracts with the IPPs. Political pressure on the IPPs to lower the contracted rates to Tenaga began as early as 1996. . . . Efforts to reduce Tenaga payments to the IPPs were not limited to obligations of the PPAs. The minister for energy, telecommunications and posts, indicated that Malaysia's five independent power producers might be asked to 'take up the slack in rural electrification programs.' At the time, Tenaga bore half the cost of providing unprofitable services to rural areas; the rest was borne by the federal government. The IPPs eventually agreed to contribute one percent of their revenues to the rural electrification program" (J. Rector, 2005, "The IPP Experience in Malaysia." Stanford Program on Energy and Sustainable Development, Working Paper #46).

CalEnergy's 1998 Renegotiation in Dieng, Indonesia

"As further evidence of Indonesia's deteriorating relationship with its contracted power suppliers, international energy supplier CalEnergy Co. Inc. said Friday it has filed a suit against the government for breach-of-power purchase contracts. . . .

"[CalEnergy Development Co. President] O'Shei said the case is twofold: the company (CE) is seeking back-payments for its geothermal power plant in Dieng, Central Java, of some \$30 million and is also seeking resolution of its contract for a geothermal power plant in Patuha, West Java, which has been suspended.

"He said PLN hasn't paid for power supplies from the Dieng plant since it began operations on March 15. The power from Dieng costs between \$4.5 and \$5 million a month, he said.

'PLN hasn't paid any invoices since then and has refused to provide us with a reasonable statement that they intend to honor the contracts,' O'Shei said. 'In general we're looking to honor the contracts, but what we're really looking for is reinforcement of our contracts'" (*Dow Jones Online News*, September 4, 1998).

National Power's 1999 Renegotiation in Pakistan

"One day in May last year, British executives of the Hub Power Co., a \$1.5 billion, 1,292-megawatt project on the Hub River near Karachi in Baluchistan, suddenly found police bearing semiautomatic weapons surrounding the power plant. The police allowed everyone but the executives to leave, and then, for five days, say the executives, they were *de facto* prisoners, refused delivery of food. Finally, the British high commissioner visited the site, and his protest led to the release of the men. . . .

"Hubco and many of the other mostly Western-owned independent power projects, or IPPs, say the administration of Pakistan's then-prime minister, Nawaz Sharif, engaged in a series of attempts to try to force them to lower the energy rates on their long-term purchase guarantee contracts. . . .

"That September the tax authorities found the company had failed to pay 1.9 billion rupees (about \$42 million) in taxes and ordered it to pay in ten days. Hubco is contesting the order, and as of the end of last month a hearing in the Lahore court was expected shortly. . . .

"Hubco appealed the Lahore court ruling to Pakistan's Supreme Court, which found that the company could pay its overseas debt obligations but could not repatriate profits to its owners. The court modified the Lahore order on rates, allowing Hubco to receive 60 percent (instead of 46 percent) of the amount cited in its original contract. . . ." (*Institutional Investor*, November 1, 1999: 109–119).

APPENDIX B: Sentiment Scores for Representative IDEA Event Categories

Event category	Sentiment score	Event category	Sentiment score
224 (Riot or political turmoil)	-12	026 (Acknowledge responsibility)	-2
174 (Give ultimatum)	-11	021 (Decline comment)	-2
1731 (Threaten forceful attack)	-10	0935 (Request mediation)	-1
1732 (Threaten forceful blockade)	-10	14 (Deny)	-1
1733 (Threaten forceful occupation)	-10	094 (Call for action)	-1
2131 (Hijacking)	-10	022 (Pessimistic comment)	0
2111 (Armed force occupation)	-9	0931 (Ask for economic aid)	0
2132 (Hostage taking and kidnapping)	-9	442 (Beliefs and values)	0
2221 (Beatings)	-9	024 (Optimistic comment)	2
2223 (Bodily punishment)	-9	092 (Solicit support)	2
2121 (Political arrests)	-8	2311 (Government transactions)	2
2122 (Criminal arrests)	-8	2312 (Private transactions)	2
175 (Other physical force threats)	-7	292 (Administrative adjustment)	2
1811 (Protest obstruction)	-7	011 (Yield to order)	2
1812 (Protest procession)	-7	012 (Yield position)	2
1123 (Veto)	-6	095 (Request protection)	3
1132 (Disclose information)	-6	0311 (Mediate talks)	3
1133 (Break law)	-6	0312 (Engage in negotiation)	3
1931 (Reduce or stop economic assistance)	-6	0822 (Agree to mediation)	3
1941 (Halt negotiation)	-6	0823 (Agree to negotiate)	3
1942 (Halt mediation)	-6	103 (Offer to negotiate)	3
196 (Strikes and boycotts)	-6	104 (Offer to mediate)	3
1121 (Impose restrictions)	-6	0824 (Agree to settlement)	3
1122 (Impose censorship)	-6	083 (Collaborate)	4
1113 (Reject settlement)	-5	033 (Host a meeting)	5
1115 (Reject proposal to meet)	-5	041 (Praise)	5
1116 (Reject mediation)	-5	044 (Apologize)	5
1721 (Threaten to halt negotiations)	-5	043 (Empathize)	5
1722 (Threaten to halt mediation)	-5	045 (Forgive)	6
171 (Non-specific threats)	-5	051 (Promise policy support)	6
151 (Demand information, investigation)	-4	0521 (Promise economic support)	6
152 (Demand policy support)	-4	054 (Assure)	6
155 (Demand mediation)	-4	0653 (Relax administrative sanction)	6
158 (Demand meeting)	-4	0657 (Ease economic sanctions)	6
091 (Investigate)	-3	055 (Promise to mediate)	7
0934 (Request an investigation)	-3	064 (Improve relations)	7
121 (Criticize or denounce)	-3	0662 (Return, release property)	7
131 (Informally complain)	-3	071 (Extend economic aid)	7
132 (Formally complain)	-3	074 (Rally support)	7
2321 (Government default on payments)	-3	046 (Ratify a decision)	7
2322 (Private default on payments)	-3		

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