

The Diffusion of Regulatory Capitalism in Latin America
Sectoral and National Channels in the Making of New Order

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Abstract

This paper analyses the sweeping restructuring of the state in Latin America and the consequent institutionalization of a new regulatory order. The analysis is grounded in an original database that covers the creation of regulatory agencies and their reform in 19 countries and 12 sectors over the period 1979–2002. Our data capture both the national and the sectoral patterns of the rise of the new order and we distinguish between (a) national patterns of diffusion, whereby the number of prior regulatory authorities within a country determines the probability of the establishment of new authorities in that country, and (b) sectoral patterns of diffusion, whereby the number of prior regulatory authority in the same sector in other countries determines the probability of the establishment of new regulatory authority in that sector. The results coincide with a growing body of literature that emphasizes the role of contagious diffusion, and shed some new light on sectoral and national channels of diffusion.

Key words:

Regulation, Regulatory Capitalism, Latin America, Policy Diffusion, Liberalization, Privatization, Regulatory Agencies.

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The global diffusion of autonomous regulatory authorities is the hallmark of the rise of Regulatory Capitalism. Governance through autonomous regulatory authorities is no longer a peculiarity of the American administrative state but a central feature of reforms in Europe (Majone, 1994; 1997; Gilardi, this volume), East Asia (Jayasuriya, 2001) and developing countries (Cook et al., 2004). It is now widely believed that the 'appropriate'¹ way to govern certain economic sectors and to limit some social risks is through the creation of autonomous regulatory authorities.² The new practice takes the form of a delegation of power from ministers and ministerial departments to arms-length bureaucracies that are staffed and governed by technocrats and professionals. According to one interpretation we are now experiencing a transformation from representative democracy to indirect representative democracy. Public policy is increasingly delegated to experts who are embedded in transnational professional communities and share similar perceptions of the problem of late-modern societies. A new layer of public policy specialization, regulatory in its orientation, is increasingly signifying a new approach to public policy whereby politicians delegate authority to regulators who in turn enjoy considerable autonomy in the formulation and administration of policies.

By observing the growth of autonomous regulatory authorities in 19 Latin American countries and 12 economic and social sectors (graph 1), it is possible to trace the gradual evolution of this practice and thus suggest a consolidation of new convention. The rate of growth of new regulatory authorities was slow for most of the 1980s but increased after 1992. From a meager 43 regulatory authorities created before 1979 (mostly in the financial sector), the overall number had grown three fold to 138 by 2002. In addition, the autonomy of all but five of the agencies set up before 1979 was enhanced through legislation.³ While this number represents only about 60% of the possible total, it is still a sweeping success for a practice that for a long time was confined to the United States (at the country level) and to only a few sectors

like central banking (at the sector level). Indeed, not one sector studied in this paper and not one country in the region, including Cuba, remained untouched by the sweeping forces of this change.

Graph 1: The Diffusion of Regulatory authorities in Latin America 1979-2002

What are the possible explanations for the dramatic growth in the number of regulatory authorities in Latin America? We suggest that a diffusion perspective can be useful. We observe that countries and sectors vary in their reception of these institutional reforms, and we use these variations to shed some light on the contagious aspects of the diffusion of reforms. Thus, we draw a key distinction between sectoral and national patterns of diffusion, so extending the arsenal of heuristics in social science research. We advance this distinction against the common practice, in both quantitative and qualitative research designs, to treat the nation as the major or even the exclusive unit of analysis. Thus, many diffusion studies concentrate on the extent to which the adopter (conceived as national policy-makers) responds to a central focus, the decisions of a regional leader, a global trendsetter, cultural peers, or neighboring country (Brooks, 2003; Gilardi, this volume; Guisinger, 2003; Lazer, this volume, Meseguer, this volume; Simmons and Elkins, 2003; 2004; Way, this volume). Most of these studies focus on decisions relating to a single sector (or issue) and are oblivious to the presence of significant sectoral variations. This paper challenges this traditional approach and emphasizes sectoral as well as national variations in the diffusion on regulatory authorities, thus providing a refined account of the process of change. With a battery of domestic and international variables that could affect the creation of regulatory agencies controlled for, the dynamics of sectoral diffusion was found to be as strong as, or stronger than, country-level diffusion.

The analysis is based on our original data set, which includes 19 Latin American countries: all South and Central American countries (except Suriname and Belize) and two Caribbean (Cuba and the Dominican Republic). The data for each country covers the establishment of regulatory authorities in 12 sectors: nine economic

regulation sectors – finance (central banking, financial services and securities and exchange) – competition (competition authorities) – and utilities (telecoms, electricity, gas, water and post) – as well as three social regulation sectors (pharmaceuticals, environment and food safety). What we have identified, counted and classified are administrative agencies that have been separated from ministries. The agencies' degrees of separation vary widely across sectors and countries, but their status as distinct entities and the use of regulation in their mission statements served as criteria for inclusion in our database. We documented the creation year of regulatory authorities in the period 1979–2002 (or the year of their reform in they existed before 1979) and examined how the probability of establishing or reforming regulatory authorities in any of these countries and sectors is shaped by prior decisions in other sectors or countries.

The results provide empirical support for four claims that touch on the general (as well as sectoral and national) peculiarities of the diffusion of regulatory authorities. First, we find, in general, that the decision to establish a regulatory authority is influenced by prior decisions and thus the issue of contagious diffusion is clearly presented as a theoretical puzzle and as a challenge to the 'structural' approaches of political analysis. This finding suggests that a 'horizontal approach' to the study of global change might be useful (see Levi-Faur, this volume). Thus, globalization might be produced and conditioned by formal and informal networks of actors who closely monitor each others' behavior. These actors are part of 'world societies' or epistemic communities that are organized around specific sectors and policy issues. Second, the process of diffusion is strongly shaped by within-sector channels of diffusion and thus prior decisions in the same sector in other countries. We find that the probability of establishing a new regulatory authority rises with an increase in prior decisions in the same sector by other countries. Third, the process of diffusion is also shaped by within-country channels of influences, and so the probability of establishing a new regulatory authority increases with prior decisions to establish them in other sectors in the same country. Fourth, the probability of establishing a new regulatory authority increases slightly more with an increase in prior decisions in the same sector in other countries than with an increase in decisions in other sectors in the same country. This suggests that cross-sectoral designs may supply equal or better tests than cross-national research designs.

I. The Context of the Rise of Regulatory Capitalism in Latin America

Latin America's Regulatory Capitalism should be assessed against four related factors: the crisis of the old 'developmental model', sweeping economic liberalization, democratization and the troubled process of state formation in the region.⁴ During the post-war period the Latin American states, in accordance with the norms of the time, pursued intensive state-led industrialization and adopted import-substitution policies in order to close the economic and technological gaps with the richest countries. During this period, the public sector expanded quickly and instruments of coordination were developed through concentration of economic power (Whitehead, 1994). However, the institutional expansion of the developmental state in Latin America was weak, and the problematic basis of the expansion of the state was revealed with the debt crisis and the hyperinflation of the 1970s (Edwards, 1995; Haggard and Kaufman, 1992; Stallings and Peres, 2000). The developmental model of state-led growth and policies of import substitution were portrayed as the causes of the problems.

From the late 1970s, economic crisis coincided with the transition from autocracy to democracy (O'Donnell, Schmitter and Whitehead, 1986). Only Colombia, Costa Rica and Venezuela had democratic regimes with competitive electoral processes before 1978, but over a brief period autocracies fell one after another, like dominoes. Indeed, the only country that has been immune to the democratization effect is Cuba.⁵ Despite episodes of regime crisis, the legitimacy of democracy seems uncontested at the moment. Based on previous democratic traditions, all new Latin American democracies adopted presidential democracy and proportional representation for their legislatures (Mainwaring and Shugart, 1997). These led to a significant level of party fragmentation, which was balanced by a strong presidential powers vis-à-vis the legislature, as well as by the capacity of presidents to forge coalitions with other parties (Payne et al, 2002). It is notable, however, that neither the transition to democracy nor the political and administrative fragmentation of decision-making hindered the reforms, as they were widely assumed to do in much of the literature of the 1980s (Remmer, 1998, 4). In fact, under newly elected leaders liberalization went farther and faster in Latin America than in any other part of the world, as has already

been noted elsewhere (Biglaiser and Danis, 2002, 98). The rush to free trade (Milner, 2001), financial liberalization (Quinn and Toyoda, 2002; Way, this volume) and privatization (Brune and Garrett, 2000) coincided with democratization, in which newly elected politicians were expected to deliver economic growth and employment opportunities. Public support for liberalization policies was relatively high (Weyland, 1998; Baker, 2001).

But although it is clear that things changed, why analyse the administrative structures of the Latin American states from a diffusion perspective? One reason is that unlike structural perspectives, diffusion perspective does not require ad hoc revisions due to previous theoretical failures to deal with change. For example, shortsighted politicians and powerful labor unions, cooperating in distributional coalitions that opposed change, are no longer the dominant actors in the scholarly analysis, having been replaced by politicians who are conceived as heroes (Harberger, 1993; Wallis, 1999) or by winning coalitions observable only indirectly and *ex post* (Schamis, 1999; Murillo, 2002). The common characteristic of these approaches is that they introduce ad hoc changes in major assumptions about the distribution of power between societal and state actors, while keeping intact the traditional framework of comparative politics, namely, the assumption of the independence of observations. The diffusion framework suggests a somewhat newer and fresher approach, at least in the context of the political economy literature.

A second major advantage of the diffusion perspective is its ability to deal with the compression of space and time that turns countries and sectors that seemed isolated from one another into interconnected and interdependent entities. It is much more open than 'structural' interpretations to the notion of transnational policy networks. In addition, unlike comparativists who perceive globalization as an exogenous force that exerts constraints on otherwise independent political units, diffusion theories suggest that all political and social events are highly interdependent. Whereas diffusion theorists treat globalization as a characteristic of the system (or the country) itself, and thus perceive it as an endogenous force, comparativists tend to place it in an external space. The more global the world, the more vulnerable comparativists are to the Galton problem and the more we can expect diffusion studies to complement traditional research designs in comparative politics and policy.

Against the background of these large-scale changes, it should not be surprising that the rise of regulatory capitalism in Latin America did not receive much attention from political scientists.⁶ Scholars who dealt with state reforms and restructuring focused on the reforms of the civil service (recruitment, promotion and remuneration), public finance (downsizing), the judiciary (fairness, access, effectiveness), management (performance, autonomy and accountability) as well as issues of responsiveness, transparency and legitimacy (Ross-Schneider and Heredia, 2003; Ramió and Salvador, 2004). Political economists focused on the study of economic adjustment, trade liberalization, privatization, foreign direct investment, financial liberalization and labor strategies (Milner, 2001; Murillo, 2002; Haggard and Kaufman, 1992; Stalling and Peres, 2000; Weyland, 2002). Institutional economists probed much more deeply into issues of regulation in Latin America; especially notable is the work of Pablo Spiller and his colleagues (Levy and Spiller, 1996; Rufin, 2000; Spiller, Stein and Tommasi, 2003). However, these studies are usually case-oriented, and when comparative they include comparisons across countries with little attention to cross-sectoral analysis. Manzetti's edited volume (2000) remains the only one that is focused on regulatory reforms as a major aspect of the change in the governance of the region's economy. However, unlike Manzetti's collection and various studies by institutional economists (Levy and Spiller, 1996; Rufin, 2000), which focus on a small number of cases, we present in this paper, for the first time, a comprehensive picture of regulatory reforms across countries and sectors. What we found surprised us, as the diffusion of the reforms across countries and sectors went far beyond our expectations.

Our data reveals that countries and sectors vary in their propensity to create regulatory authorities; also, the rate of diffusion across countries and sectors is not constant over time. For example, Chile, which led the process in the beginning of the 1980s, lagged behind in the 1990s. Similarly, some encouraging signs of rapid diffusion of competition authorities in the early 1990s did not materialize in the mid-1990s. The slow rate of diffusion in Brazil and the water sector coexists with a rapid diffusion in Argentina in the water sector and in all the three financial sectors. All these cases, like many others, require some detailed analysis that we have developed elsewhere, including some historical perspective (Jordana and Levi-Faur, 2005), but

here we wish to focus on more general explanations of the logic of diffusion. In the following sections, we present both a methodological and a quantitative analysis of the regulatory reforms; however, it is relevant to note that the idea of governance through autonomous regulatory agencies has some historical roots in Latin America though, almost exclusively in the financial sectors. Some authorities were established as early as the 1920s, often following the example of the United States. The Kemmerer missions to different Latin American countries during the 1920s influenced early decisions to establish public central banks and separate authorities to supervise financial activities (Drake, 1989). Outside the financial sectors only a few regulatory agencies were established. Costa Rica, for example established a regulatory authority to govern the electricity sector as early as 1928, and one for telecoms in 1963. A historical perspective on the diffusion of regulatory agencies in Latin America prior to the neoliberal idea seems to suggest, therefore, that for many decades the major channels of diffusion were sectoral (Jordana and Levi-Faur, 2005).

II. Diffusion Within Nations *versus* Diffusion Within Sectors

In order to bridge the gaps between the rich literature of comparative politics and the relatively modest literature on the diffusion of political innovations, we distinguish between two popular comparative approaches: the National Patterns Approach (NPA) and the Policy Sector Approach (PSA) (see Levi-Faur, 2004b). The NPA suggests that political processes and outcomes are shaped by a country's unique national and historically determined characteristics embedded in specific state traditions, and that the nation-level community of policy-makers has effective control over domestic political processes. The PSA emphasizes the autonomous political characteristics of distinct policy sectors, and hence the multiplicity of political patterns in any one country. The major point might be summarized in two propositions: '[First] that the style of policy making and the nature of political conflicts in a country will vary significantly from sector to sector. ...[And second] that policy making in a particular sector will exhibit strong similarities, whatever its national context' (Freeman, 1986, 486; see also Atkinson and Coleman, 1989). As we

will demonstrate shortly, these two approaches, which shape much of the research agenda of the disciplines of comparative politics and public policy, have important implications for our conceptions of how diffusion occurs.

Figure 1 about here: Contagious Flows: NPA and PSA Perspectives

The two approaches yield different predictions about the diffusion of regulatory authorities. The NPA expects the diffusion process to be shaped by national factors and therefore predicts that the number of other regulatory authorities in a country will determine the probability of the establishment of new authorities. The PSA, by contrast, expects sectors to exert the major influence on the diffusion process and therefore predicts that the establishment of new authorities within a sector will be determined by the number of regulatory authorities in the same sector in other countries. The first impetus for this distinction came from the realization that variations abound across both nations *and* sectors. The second impetus came from the realization that the channels of diffusion may suggest something important about the agents of change that often remains largely behind the veil. Figure 1 may help to clarify our point. The figure presents two different channels of diffusion in a system with two countries and two sectors. Our countries, say Argentina and Brazil, have two sectors each: telecoms and electricity. Now, the NPA and the PSA suggest different process of diffusion. The channels predicted by the NPA are national, and so a change in Brazilian telecoms is expected to be followed by a change in Brazilian electricity. Correspondingly, change in Argentinean telecoms is expected to be followed by change in Argentinean electricity. Nations thus will have different propensities to establish regulatory authorities, and the national institutions and the national policy community are expected to have a critical role in the process. The PSA predicts differently: the most important channels of diffusion are expected to be from a sector in one country to the same sector in another country. If the NPA expects within-country diffusion, the PSA expects within-sector diffusion. Accordingly, the NPA expects national institutions and national policy communities to shape the outcomes, while the PSA expects sectoral institutions and sectoral policy communities to do so.

Our next step was to test these predictions against the data. What we were looking for was a measure of the probability of the establishment of a new regulatory authority to the extent that it depends on the number of authorities established in the same country and in the same sector (after controlling for some other possible explanations of the establishment of regulatory authorities).

III. Regulatory Diffusion: Quantitative Analysis

In a preliminary paper we presented a qualitative and historical approach for the study of diffusion in Latin America (Jordana and Levi-Faur, 2005). In this paper we use event history analysis techniques to investigate the creation or reform of regulatory authorities over time while using time-varying variables.⁷ Our dependent variable (RANOW) reflects the establishment of a regulatory authority in all sectors (12) and countries (19) during the period 1979–2002. We start the analysis in the year 1979, since this is the year of the accession to power of Margaret Thatcher in the United Kingdom, and close enough to the accession to power of Ronald Regan in the United States in 1981 and the ascendancy of Chicago economics in Chile. Since the decision to start in 1979 is somewhat arbitrary, we have checked the sensitivity of our data to different starting points and found that it is not sensitive to this decision. Since Cuba was part of the ‘socialist’ world until the collapse of the Soviet Union, we include it in our risk set only from 1991. This allows us to study the ‘hazard rate’ of an event that is measured in discrete units (years) over a period of 24 year (1979–2002). The hazard rate is defined as the conditional probability that an event – in our case the establishment or reform of a regulatory authority – occurs at any time t , given that the event has not yet occurred prior to t in a certain country and sector (Box-Steffensmeier and Jones 1997, 1417). Thus, the dependent variable is the hazard rate for the creation or (if it was created before 1979) reform of a regulatory authority and it is coded ‘1’ for the year when the event occurs, ‘0’ for all years before and censored after the year of the event.

The dependent variable is examined as a function of (a) within-sector contagious diffusion, that is, the creation or reform of regulatory authorities in the same sector in all other countries where a regulatory authority was created at time $t-1$ (practically

the former year); (b) within-country contagious diffusion, that is, the creation or reform of regulatory authorities in the same country in other sectors. We then specify in this model a set of domestic and international factors that characterize countries at time $t-1$ and may have an effect on the process of diffusion. To these two components of the model, which reflect the predictions of the horizontal approach for diffusion, we add a battery of components that reflect the predictions of alternative hypotheses derived from bottom-up and top-down approaches (see Levi-Faur, this volume).

The contagious diffusion variables: In order to assess the effects of prior decision on the establishment of a regulatory authority, we construct two independent variables that aim to capture different potential diffusion influences. We first define a diffusion variable that counts over time the number of prior decisions to establish a regulatory authority in each of the 12 sectors as a measure of the effects of sectoral diffusion (SRA). Prior decisions as well as current decisions are coded annually, with the calendar year used as the unit of analysis.⁸ In addition, we define another variable that counts over time the number of prior decisions to establish a regulatory authority in each of the 19 countries as a measure of the effects of country-level diffusion (CRA). These two variables capture the central hypotheses of this paper, namely, that the diffusion process is contagious rather than structural and that regulatory authorities have been significantly influenced by prior decisions in other countries and sectors.⁹

Domestic factors: We examine several variables here – first, the effects of economic resources on the probability of the creation or reform of regulatory authorities, using as an indicator the gross domestic product per capita (gdppc95). The literature suggests here two conflicting expectations. We may expect poorer countries to be more vulnerable to pressures to reform their sectors (if adoption is coercive) but also to lag behind because of a lack of resources. We know from diffusion research across the American states that rich states innovate faster (Walker, 1969; Gray, 1973); this is usually explained by the fact that richer states have a greater margin of spare resources, rendering policy experimentation easier and the risk of failure less severe (Orenstein, 2003). Second, since various studies have shown that liberalization is positively connected with democratization, we examine here, using the Polity IV database, the effect of the level of democracy (POLITY). The polity index is

composed of 11 points of democratic characteristics and 11 points of autocratic characteristics. Our variable Polity captures the difference between these indices and takes on values ranging from 10 for highly democratic countries to -10 for highly autocratic countries. In addition, we include a three-year-lagged variable of change in the level of democracy (DCHANGE) in order to examine how the dynamics of democratization affect the creation of regulatory authorities. Third, in order to capture some of the structural characteristics of countries, we use Witold Henisz's Political Constraints Database, which presents a measure of the extent to which political actors at the national level are constrained in their choice of future policies. The variable Polcon3 indicates the degree of constraint on policy change using data on the number of independent veto points in the political system (executive, legislative, judicial and sub-federal branches of government) and the distribution of political preferences both across and within these branches (Henisz, 2000, 4).

Finally, we enquire into the extent to which variations in the probabilities of establishing new regulatory authorities are determined by the countries' decisions to privatize. Reading the literature on regulatory reforms, we expect regulatory authorities to be associated positively and strongly with reforms in general and privatization in particular. Our privatization data is derived from our own database, which includes information about the timing of the first privatization event in four economic sectors (telecoms, electricity, gas and water). We constructed a two-year-lagged binary covariate of the first privatization event for the four sectors for which we had data. This variable (privnow1) was coded 1 for the years of privatization in the four sectors on which we had data. We also constructed a two-year-lagged binary covariate (privnowc1) that captures the first time in which a country was 'infected' by privatization in these four sectors. This variable was coded 1 in the year the first privatization occurred in one of the four sectors of which we had data and therefore indicates a country's first leap on to the privatization bandwagon.

International Factors: Openness to international trade is a classic measure of a country's economic and political orientation and of its embeddedness in the world economy. Degrees of openness matter, or are supposed to matter, both over time and across nations. Trade policy nowadays is less 'managed' and 'protectionist' than in the post-war period (Milner, 2001), and some countries and sectors are more open

than others. Here we first capture the variations in the levels of trade openness and the dynamics of this change in order to examine how a country's propensity to trade liberalization affects its propensity to create regulatory agencies. We use in this paper the most widespread measure of trade liberalization, namely, trade as a ratio of GDP (TradeGDP). This measure is the sum of exports and imports of goods and services as a share of gross domestic product.¹⁰ Countries also vary in their vulnerability to external pressures. We use two preliminary measures that serve as proxies of a country's vulnerability. The first relates to its dependency on international aid and the second to its ability to finance its debt. We have two indicators of international aid: aid per capita (Aidpercapita) and aid as a percentage of imports of goods and services (Aidimpt). Debt is captured by two indicators: debt service as a percentage of central government current revenues (TDSperGovRev) and covariate of present value of debt as a percentage of exports of goods and services (TDSperExport). If the rise of the Regulatory Capitalism is a product of international pressures from donors and international financial institutions, we expect these measures to capture those pressures.

IV. Results: Within-Sector and Within-Nation Contagion

The results of our analysis are presented in Table 1. We present three different models that include the same contagious diffusion variables but progressively examine some additional variables that may affect the diffusion process. Model 1 includes only the diffusion variables and the measure of country's economic performance. Model 2 adds political variables (constraints, vulnerability and democratization) as well as trade orientation and economic variables. Model 3 adds to Model 2 measures of privatization. The results are very encouraging. Not only do we document the process of the diffusion of regulatory authorities and the rise of the Regulatory State in Latin America but we are also able to demonstrate, in yet another arena, the importance of contagious diffusion. The numbers of others who created or reformed regulatory authorities are good predictors of new creation or reform in the period examined. Interestingly enough, the results are stable across the three models, and the effects of sectoral diffusion are significantly stronger throughout than country ones.

Graph 2 presents in three-dimensional format the predicted probabilities of the establishment of new regulatory authorities as a combined effect of within-country and within-sector diffusion (based on Model 1, keeping GDP to its mean)). Looking at both country and sector dimensions, we find that the probability of regulatory institutions being created increases less rapidly when countries already have one or more such institutions in other sectors (within-country diffusion) than when agencies already exist in the same sectors in other countries (within-sector diffusion). When we compare the probabilities of these two channels of diffusion, the probability is higher for within-sector diffusion (about 16% when the number of agencies in the same sector in other countries is 14, and there are no agencies already existing in the country) than for within-country diffusion (about 2.6% when the number of agencies in the same country is 4, and no agencies already exist in the sector).¹¹ The graph also allows us to observe the combined effects of within-sector and within-country diffusion. When a new sector is expanding, those countries that already have a significant number of agencies in other sectors are the most likely to create a new agency in that sector. For example, we find that the probability of a new agency reaches a maximum of almost 25% when there are already 4 agencies in the country and 14 other countries have established regulatory agencies in the relevant sector.¹² We therefore have strong visual confirmation of the importance of both cross-national and cross-sectoral factors and consequently of the desirability of research designs that combine both sectors and nations.

Insert about here Table 1 and Graph 2

Wealthy countries in Latin America created or reformed more regulatory authorities than poor ones. This is a clear and significant observation in our three models. However, what is intriguing is the relative influence on probabilities of new agencies being created: here we find that diffusion variables have significantly and consistently stronger impacts than per capita GDP levels. If we observe odds ratios in Model 1, the number of existing agencies in a sector or a country has a greater impact on a new creation or reform than significant increases in per capita GDP levels. Holding other variables constant, we find that an increase of \$1,000 in a country's GDP per capita increases the odds of creating or reforming a regulatory agency by 30%; however, the existence of an additional regulatory agency in a sector increases

the odds of a new event in that sector by 66%, while an additional agency in a country increases the odds of a new one by 55%.¹³ Thus, we can observe that diffusion forces can be very strong irrespective of wealth levels and, indeed, stronger than the impact of a higher GDP.

Let us now consider the 'usual suspects' in comparative political economy, and first of all to the measure of political constraints that is taken from Henisz database (Polcon3). What we know about veto points leads us to expect that countries that are characterized by more political constraints will find it more difficult to change their policies and therefore are expected to be found less likely to establish regulatory authorities than countries that are less 'constrained' (see results for Europe in Gilardi, this volume). Yet our covariate Polcon3 has positive effects on the probability of establishing new regulatory authorities. It seems that in Latin America political environments that limit the feasibility of policy change are positively connected with the creation of regulatory authorities. We do not find clear support for the view that democracy as a regime and democratization as a process of change affects the process the diffusion of regulatory authorities. The variables are not consistently significant in the different models, but such results as there are suggest that more robust democracies create slightly fewer regulatory agencies. This political puzzle, which arises from putting together democratization and veto players, is not easy to interpret, but it may be that, with the democratization wave in the region, many countries created regulatory authorities as a part of their 'constitutional' design. It may also be the case that countries that had more veto points in their political process found it natural to have these new institutions, since they generate additional veto points.

International factors do not seem to have a strong impact on decisions to create or reform regulatory authorities. The trade orientation of a country was not found to be a significant predictor of countries' propensity to establish regulatory reforms, except in Model 3, where a significant positive effect is observed. Thus, results are unclear on whether countries that are more embedded in the international economy tend to create more regulatory authorities than countries that are less embedded. Again, this measure should be refined in order to capture patterns of trade (for example, does the result hold when trade in industrial goods is examined separately from other

goods?). But, for the moment, the group of covariates that serve as a proxy for countries' vulnerability to international economic and political pressures (aid and debt service) do not provide strong support for the top-down explanation of the diffusion of regulatory authorities. Variables related to aid and to exports seem to show some small significance, suggesting that highly vulnerable countries that are also very open to trade might have a small positive impact on the dependent variable. However, the results are not very robust. This is not surprising against the background of other studies that found that, on issues that are even more prone to international pressures than the issue of the creation of regulatory authorities, coercion or pressure from the top did not obtain support. For example, Guisinger (2003, 8) found that both members and non-members of the World Trade Organization moved in the 1980s and the 1990s towards more trade liberalization. Meseguer (2003, 3) found that coercion was not positively related to the probability of privatization in Latin America and the OECD. Brune and Garrett (2000) found that indebtedness to the IMF is not a good predictor of privatization. Conditionality terms of the IMF and the World Bank's loan arrangements were not decisive forces in shaping countries' decisions to liberalize (Vreeland, 2003; Edwards, 1997). Levi-Faur (1999; 2003; 2004a) suggested that the European Union is not the major force beyond the liberalization of the telecoms and electricity industries in Europe.

What we are suggesting here is not that international organizations, donor countries and hegemonic countries like the United States are not important, but that they are only part of the story in understanding regulatory reforms. Moreover, related to the evidence of horizontal diffusion, it might be useful to consider the role of some international organizations not only from a top-down perspective but also as platforms for the dissemination of ideas and thus treat them as part of the contagion process. If the world is indeed shrinking and becoming compressed, these international institutions should be more embedded in national and sectoral policy communities.

Also sensible are our results on the logic of privatization. The privatization covariates are significant and seem to have strong effects on the probability of the creation of regulatory authorities. Countries' decisions to privatize are positively and significantly associated with the creation of regulatory authorities both when the

effects of sectoral privatization (privnow1) are considered and when we examined a country's propensity to create regulatory authorities (privnow1) by coding a country as privatizer when the first privatization occurred in one of the four sectors on which we had data. We can suspect, thus, that privatization itself is diffused and interacts with the creation of regulatory authorities. Causal relations between these two diffusion phenomena are unclear, and more research will be needed to model their joint diffusion dynamics.

V. Conclusions

While a major aim of this paper has been to present and document the little-known rise of the Regulatory Capitalism in Latin America, it has had two further aims. We examined the rise of the new order from a diffusion perspective and have argued that only from this perspective is it possible to explain why so many new regulatory agencies were established or reformed in a short period across so many sectors and countries. The metaphor of mushrooms and rain is obviously appropriate to describing the explosion in the number and scope of regulatory authorities; but, unlike with mushrooms and rain, we demonstrated that interdependence exists, not with any exogenous force, but from one regulatory authority to another. In other words, we endogenize the process of change in analysing regulatory reforms in Latin America. Our findings correspond with those of a growing body of literature that has documented the effects of contagious diffusion in different contexts such as IMF loans (Przeworski and Vreeland, 2000), telecoms and electricity privatization and regulation around the world (Levi-Faur, 2002), privatization (Brune and Garrett, 2000), financial liberalization (Simmons and Elkins, 2003; 2004; Way, this volume), delegation in Western Europe (Gilardi, this volume), pensions (Brooks, 2003; Orenstein, 2003), international trade (Guisinger, 2003) and even democracies (Gleditsch and Ward, 2003). Together with this rapidly evolving body of literature, we suggest that the traditional comparative approach, which treats change as exogenous, should also examine endogenous sources of change, particularly how the probability of adoption of innovations (idea, norm, organization, preference) depends on prior decisions of others and significant others (that is, peers). The effects of international organizations and US hegemony are better understood in the context of group processes, the soft power of influential peers and group dynamics, represented by the sheer numbers of others. From this point of view, we also suggest

moving the discussion from the sphere of the power of money to the sphere of the power of ideas, and from a 'realist point of view' to a more constructivist and sociological one. In such a setting, ideas about best practice are diffused through networks of policy-makers and epistemic communities (which behave according to a certain logic of collective action, a logic that is often invisible to the members of these networks). It is the sociology of knowledge rather than interest politics that is best placed to explain the diffusion of regulatory authorities in Latin America and probably elsewhere, especially if more sophisticated models of agents' behavior can be included in the analysis. We expect interest and power to be more salient and dominant in the implementation process and to be revealed only through a close and case-oriented analysis of the correspondence between the blueprint and the actual implementation of the adopted innovation.

Our particular analytical contribution to the diffusion literature is the distinction between sectoral and national patterns of diffusion and the formalization of a heuristic that makes it possible to study them together (see also Levi-Faur, 2004b). Probably our most interesting finding is the diffusion from a sector in one country to the equivalent sector in another country and the rather slower diffusion between sectors within one country. Much more discussion and analysis is needed on which variables are most influential in explaining sectoral variations, although, as we have suggested above, the strength of international networks and professional communities, and their specialized nature, may be very relevant indicators to this end. While we have identified a process of 'social learning', the most prominent component of this process is emulation, and we could not confidently cite evidence of 'learning' in the sense that followers' observations took into account the effects of change in the structure of the state on growth and foreign and private investment. In short, we are skeptical about the claim that the process of change is essentially about learning. It is not that countries cannot learn but that their capacity to do so, especially under the economic, political and social conditions in Latin America, should be considerably enhanced before a significant improvement in their performance becomes visible. At the moment, even the 'willing pupils', to use the notion of Jacoby (2001, 170), are essentially imitating the rich and successful countries of the 'North'. These countries are at the moment not only telling the poorer ones what the solutions to their problems are; they are also defining and telling them what

their problems are. From this point of view, the current restructuring of the state in Latin America is another chapter in the long saga of the export of Occidental state structures to the rest of the world.

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Graph 1: Regulatory authorities in Latin America , created or reformed during the period 1979-2002 (19 countries, 12 sectors)

Table 1: The diffusion of regulatory authorities in Latin America 1979-2002, logistic regression (coefficients)

Figure 1: Contagious flows: NPA and PSA perspectives

Graph 2: Predicted probabilities of establishing regulatory authority (as function of prior sector decision in other countries and prior country decision in other sectors).

Appendix A: Summary of variables and their sources

Graph 1:

Regulatory authorities in Latin America, created or reformed during the period 1979-2002 (19 countries, 12 sectors)

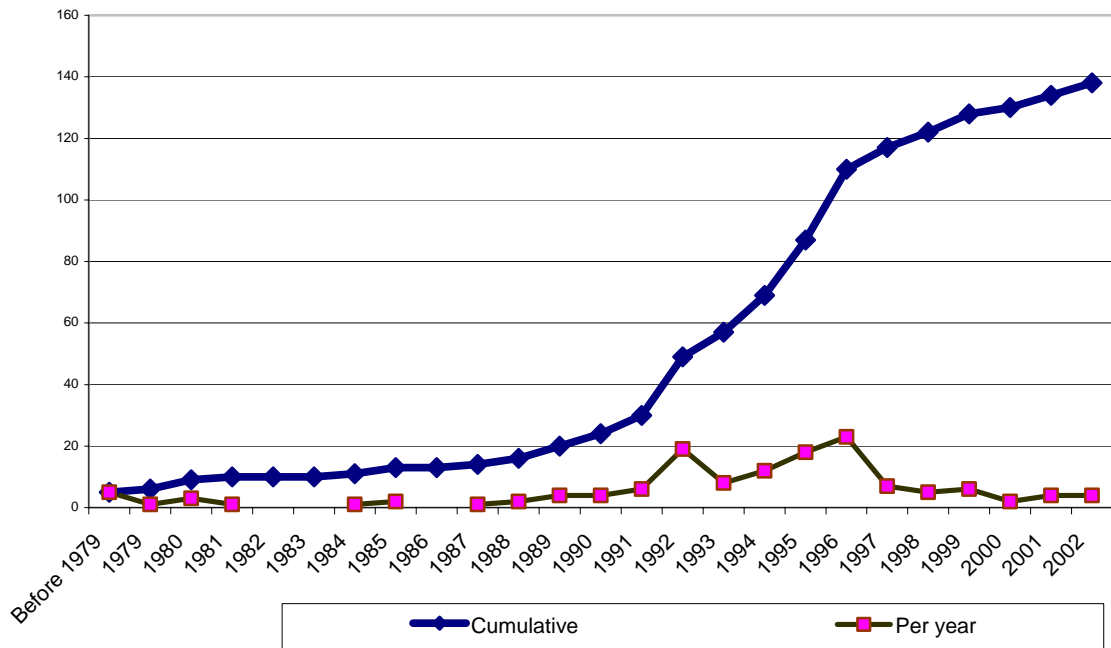
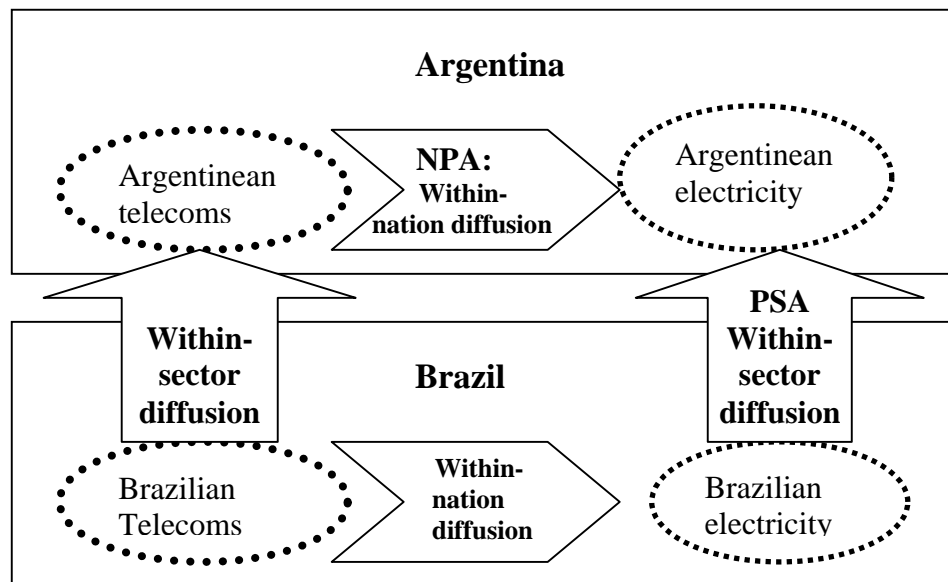


Table 1: The diffusion of regulatory authorities in Latin America 1979-2002
Coefficient (logistic regression)

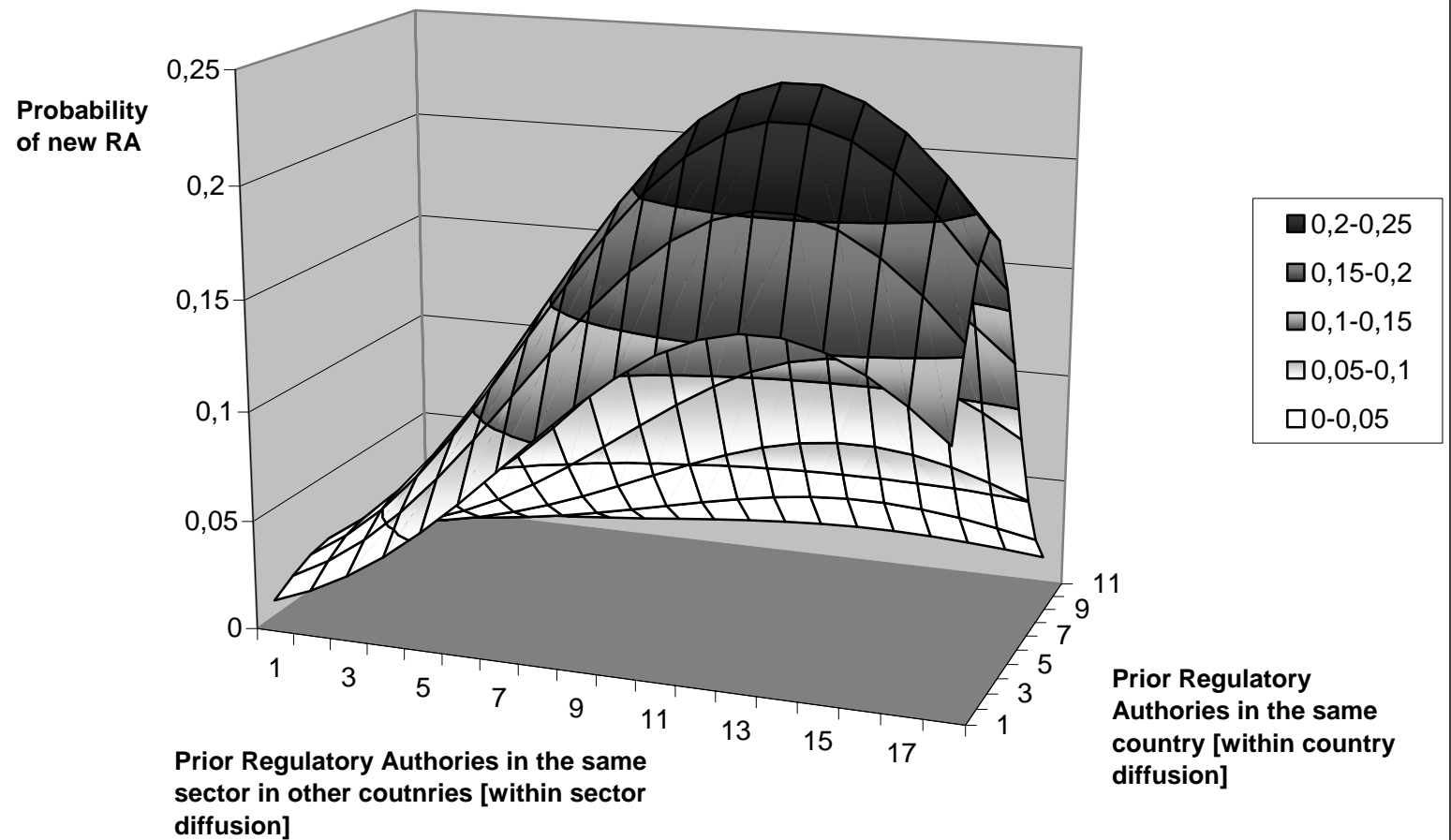
	Model 1		Model 2		Model 3	
<u>Contagious diffusion</u>						
SRA (within sector)	.508 (.111)	***	.940 (.151)	***	.762 (.154)	***
CRA (within country)	.437 (.068)	***	.535 (.087)	***	.477 (.088)	***
SRA2	-.062 (.015)	***	-.112 (.022)	***	-.101 (.022)	***
CRA2	-.016 (.004)	***	-.023 (.006)	***	-.020 (.006)	***
<u>Economic resources</u>						
Gdppc95	.2597 (.052)	***	.216 (.094)	**	.323 (.105)	***
<u>Political constraints</u>						
Polcon3			.030 (.009)	***	.027 (.009)	***
<u>Trade orientation</u>						
TradeGDP			.012 (.009)		.019 (.009)	**
<u>Economic and political vulnerability</u>						
Aidimpt			.050 (.033)		.062 (.035)	*
Aidercapita			-.020 (.011)	*	-.021 (.012)	*
TDSperGovRev			.006 (.009)		.007 (.009)	
TDSperExport			.017 (.009)	*	.019 (.009)	*
<u>Democracy</u>						
Polity			-.064 (.033)	*	-.044 (.035)	
Dchange			-.211 (.12)	*	-.175 (.116)	
<u>Privatization</u>						
Privnowl					.923 (.360)	**
Privnowcl					1.022 (.279)	***
Constant	-5.779 (.281)	***	-7.886 (.749)	***	-8,877 (.848)	***
Chi squared	189.86		197.96		222.73	
Prob > chi squared	0.0000		0.0000		0.0000	
Log likelihood	-475.57		-324.52		-312.13	
Pseudo R-squared	0.1664		0.2337		0.2630	
No of observations	4018		2858		2858	

Note: *** p<.01, ** p<.05, * p<.10; Standard errors in parentheses

Figure 1: Contagious flows: NPA and PSA perspectives



Graph 2: Predicted Probabilities of Establishing Regulatory Authority
(as function of prior sector decision in other countries and prior country decision in other sectors)



Appendix A: Summary of variables and their sources

Variable	Measure	Source
RANOW (dependent variable)	Establishment of RAs. Dummy variable that takes the value of 1 for each year (1979-2002), sector (12) and country (19) when RA was established.	Authors' LA regulatory database
CRA, CRA2 (contagious diffusion variable, within country)	Covariate of the number of RAs created in each country before the year when a new one was established. [CRA2 is a squared measure of CRA]	Authors' LA regulatory database
SRA, SRA2 (contagious diffusion variable, within sector)	Covariate of the number of RAs created in the same sector in other countries before the creation of a new one in that same sector. [SRA2 is a squared measure of SRA]	Authors' LA regulatory database
Gdppc95	Covariate of the a country GDP per capita, in 1995 US dollars (in 1,000 US\$ units)	World Development indicators, 2002 [WDI]
Polcon3	Covariates of countries' veto points and distribution of preferences across and within the government branches (changed to a per cent scale).	Witold Henisz Database (Henisz, 2000).
TradeGDP	The sum of exports and imports of goods and services measured as a share of gross domestic product.	WDI
Aidpercapita	Official development assistance and net official aid record (current US\$)	WDI
Aidimpt	Aid as percentage of imports of goods and services.	WDI
TDSperGovRev	Covariate total debt service as percentage of central government current revenue.	WDI
TDSperExport	Covariate of present value of debt as percentage of exports of goods and services	WDI
POLITY	Time covariate of democratic characteristics of a country minus its autocratic characteristics.	POLITYIV Database
Dchange	Time covariate 2-years-lagged variable of the change in the level of democracy	POLITYIV Database
Privnowl	Binary covariate that represents privatization in the sector (data only for electricity, telecoms and gas), lagged 2 years	Authors' LA regulatory database
Privnowcl	Binary covariate that represents the earlier privatization among the above three sector for a country, lagged 2 years	Authors' LA regulatory database

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NOTES

¹ On the logic of ‘appropriateness’, see March and Olsen (1989). The consensus about the appropriateness of regulatory regimes is not unique to these sets of agencies and is also observable in other aspects of liberalization.

² These agencies are often called ‘independent’, but a more proper label might be ‘autonomous’ both because the notion of independence is conceptually problematic and because only 103 of 138 agencies in our database are nominally independent, and in most of these cases the degree of independence is doubtful.

³ A regulatory authority is considered to be autonomous when autonomy is explicitly mentioned in the written rules governing its operation. Thus, we document nominal rather than substantive autonomy. We inquire whether the law that establishes or reforms the agency includes a statement on autonomy. If not, we require at least a fixed term of office for the head of the agency before deciding on autonomy. These are not very demanding criteria in relation to the presumption of independence, but we believe that they allow us to tell whether a minimum of innovations have been introduced, even if of only a formal character, to increase the costs of government interference in the activity of the regulatory authority (see Jordana and Levi-Faur, 2005).

⁴ This section is based on Jordana and Levi-Faur (2005).

⁵ Recent classification of the region’s regimes classified 12 countries as democracies and five as semi-democracies (Mainwaring, Brinks and Perrez-Linann, 2001).

⁷ Time-varying variables are variables that change over time (such as GDP per capita or prior decisions to establish regulatory authorities). Censored data reflect the existence of episodes that were not yet completed or on whose history we have only partial data. We distinguish between left censoring, in which the starting time of an event is not clear, and right censoring, which occurs when the event is still unfolding.

⁸ A limitation of this kind of data is that prior decisions that fall within the calendar year cannot be identified and counted. We believe, however, that, since the legislation process is relatively long and less salient across borders than the final outcome, this does not represent a serious problem for our analysis.

⁹ To better estimate the function, we also included the quadratic square of both variables in the model (SRA2 and CRA2), which allows a curvilinear effect.

¹⁰ For an excellent review of the various measures of trade liberalization, see Guisinger (2003).

¹¹ Note that beyond a certain number of agencies the effects of additional ones declines for both country and sector dimensions (and declines faster within-country than within-sector).

¹² Within-country diffusion increases the probability of a new event, but is not a very significant predictor when the number of agencies in other countries is low; within-sector diffusion has a very strong influence when a minimum number of agencies already exists in a country.

¹³ In addition, the calculus of fully standardized coefficients for Model 1 confirms this observation even if we take into account possible scale differences among the different variables.