How do “Mineral-States” Learn? Path-Dependence, Networks, and Policy Change in the Development of Economic Institutions

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Summary. — Based on case-study methods, I draw lessons from the political economy of macroeconomic management in Chile and Peru to explain how “mineral-states” learn to think long term and eventually escape the resource curse. I give an institutionalist account of the rise of countercyclical funds, showing how the long-term development of elite networks qualifies the contemporary making of curse-escapes. Policy networks compose one central avenue of institutional development, for both the reproduction of path-dependence and the making of institutional change. The exposition challenges political economy of development frameworks which over-emphasize structural (initial) conditions and assume steady (rent-seeking) behavior of state agents.

Key words — resource curse, institutions, institutionalisms, networks, Chile, Peru

1. INTRODUCTION

Can mineral-dependent states learn to think long-term? How so? The political resource curse argues that resource-dependent countries—or more properly their state authorities—become myopic and rent-focused. Bad institutions are endogenously reproduced from the perversive incentives set by windfalls (Barbier, 2003; Karl, 1997; Ross, 1999). In fact, the “resource curse” refers to a wide range of stylized poor-quality development patterns: volatile growth, enclave growth, unsustainable growth, rentierism, conflict-prone development, and so on (Auy, 1993; Collier & Hoeffler, 2005; Sachs & Warner, 1995). From fiscal imbalances and temporary exchange rate appreciation to corruption and violence, scholars have identified various types of resource curses and have argued that there are assorted medicines for each (e.g., Humphreys, Sachs, & Stiglitz, 2007). Whatever the disease, cursed countries seem to be unwilling to go into rehabilitation because of institutional structures cemented by resources.

The in-depth study of development in resource-rich Chile and Peru challenges the political resource curse thesis. In contrast to the theory, policy networks in these countries have systematically attempted to learn how to better manage the resource-dependent economy. This paper shows how cumulative policy network activism has left behind institutional endowments and culture on which distinct contemporary curse-escape schemes are built. A paradigmatic case of long-term thinking is the Chilean state. In mineral-dependent Chile, where mining represents about 75% of exports and 25% of fiscal revenue, policy behavior aims to be forward-looking rather than myopic, welfare-enhancing rather than rent-seeking. Created in 2006, the copper funds, two sovereign wealth funds (SWF) for countercyclical and pensions expenditure, respectively, were created with the rationale of saving revenue from the good years in order to spend it in the bad ones, while contributing to the taming of exchange rate appreciation. The scheme equipped the Chilean state with financial resources and policy credibility for macroeconomic management during the unforeseen 2008–09 financial crisis. The Peruvian state offers a less apparent example of curse-escape making. Resource-rich Peru, where mining has comparable economic significance, has also experimented with Fiscal Responsibility Laws and countercyclical schemes, but on a much smaller scale and through less formal policy rules. The comparison, thus, pairs a case of cautiousness with a case of mild-cautiousness in the management of the macro economy. Degrees of prudence and skill aside, Chilean and Peruvian state authorities have both experimented with Dutch disease remedies, a fact that the political resource curse theory cannot explain well.

How can social science research explain the making of these curse-escapes? Frameworks and methods developed by the new historical and sociological institutionalisms help us to better understand policy choice and institutional change (Hall & Taylor, 1996; Mahoney & Rueschemeyer, 2003; Scott, 2008). Views that give too much weight to “initial conditions” and early lock-in (e.g., Acemoglu, Johnson, & Robinson, 2003; Kurtz, 2009) or assume that state actors are always rent-seeking (e.g., Robinson, Torvik, & Verdier, 2006; Sala-i-Martin & Subramanian, 2003) do not provide well-rounded or accurate frameworks to analyze actual and potential institutional development. The evidence 1 present demonstrates that structure does not wholly determine agency and that policy agents are bounded, enhanced, and constrained, by evolving networks. The remainder is organized as follows: Section 2 reviews resource curse diseases and institutional diagnoses. Section 3 explains the approach and method. After the general argument has been presented, empirics follow. Section 4 analyzes how networks contributed to reproduce path-dependent state institutions. Section 5 traces network-enhanced agency conducing to policy change. Section 6 concludes by explaining how institutions mattered in the cases of Chile and Peru and by drawing policy lessons.

2. RESOURCE CURSE DISEASES AND INSTITUTIONAL DIAGNOSES

Related but different political economy phenomena are referred to by the same “resource curse” label. I have identified...
six families of development problems in which mineral abundance leads to poor-quality economic progress, to be called for simplicity “resource-curse diseases.” They are: (1) macroeconomic instability and poor economic growth rates, (2) disincentives for diversification, (3) unsustainability of growth, (4) social unfairness, (5) bad democracy, and (6) violent conflict. Expositions on the political and economic dynamics of each of the diseases include Economic Commission for Latin America (1950) and Auty (1993) on the macroeconomy, Hirschman (1958) on diversification, Dasgupta and Heal (1979) and Atkinson and Hamilton (2003) on the sustainability of resource-based growth, Sawyer (2004) and Ross (2008) on social aspects, Dunning (2008) and Haber and Menaldo (2011) on democracy, and Collier and Hoefller (2005) and Snyder (2006) on conflict. Each of the diseases entails a range of potential economic and political mechanisms and effects, which can be related to one another within and beyond the scope of a disease family, since maladies commonly come in packages. The typology of diseases indicates that the curse of natural resource-based growth can be expected to take multiple forms (one or more of the listed families), that a variety of interconnected dynamics are at play, and therefore, that in principle the way in which resource wealth impacts economic and political development is far from simple. The treatment of every type of disease calls for a collective response, the response of the state in particular.

Contrary to what early resource curse literature stated, two decades of quantitative-based studies show that the existence of the resource curse is a disputable fact. Variance in the dependent variable—whether that means economic or political outcomes—is simply too big to claim universality (Dunning, 2008; Haber & Menaldo, 2011; Lederman & Maloney, 2003; Mehlum, Moene, & Torvik, 2006). Building on a rich canon of empirical literature, primarily econometrics-based, this paper tackles the resource curse from a different perspective, a process-focused institutional one. The exposition begins with a puzzle. Resource curse mechanisms, effects, and even cures are all well understood in theory, yet in practice, decision-makers tend to handle resource curses poorly. A general resource curse pattern might be disputable, but the empirical evidence is solid in showing that a subset of resource-rich countries suffers a range of associated developmental diseases. When a resource curse is observed, the assignment for scholars of resource-based development is to explain why the curse is not addressed by policymakers. Resource abundance may be seen as a curse because of the assortment of multiple diseases it entails: one year it brings diseases 1 and 4, the other, diseases 2 and 3. Yet we still need to explain why policymakers are unable to fix these recurrent problems. In particular, short-term macroeconomic management might be the least complex challenge of all, or at least the most studied, and so its remedies should have spread across resource-dependent economies with little difficulty. Why would a resource-rich country fail to learn from its presumably long history of curse afflictions? The answer to the query demands unpacking the meaning of “institutions matter.”

The political resource curse offers a meta-theory to explain the inability to learn: the institutional trap. Generalizing Terry Karl’s argument for all mining-based development, dependence on mineral revenues will produce a distinctive type of institutional setting, the mineral-state, which encourages a political economy of rent distribution and the progressive weakening of the state (Karl, 1997, p. 16). At the agent level, the argument refers both to the rentier mentality and the policy-myopia propensities that state officials develop as a consequence of a mineral dependent structural setting. When it comes to society as a whole, Karl argues that windfalls minimize the need for taxation and the consequent demand for accountability by citizens. The logic of the revenue-centered political resource curse hypothesis is that natural resources set up a development field that constrains the choices of involved players, policymakers in particular (Paredes, 2012; Ross, 1999).

The institutional trap diagnosis is challenged by some empirical evidence and challenges the practice of policy advice. Resource-rich countries display many types of institutional settings. As econometric evidence suggests, for every Nigeria with relatively bad growth and bad institutions, there is a Botswana with relatively good growth and good institutions. A qualified institutional trap hypothesis can be suggested, though. Under some conditions, resource-rich countries can become either “successes” or “failures” at a very early stage of development after which they are doomed to follow a path of continuity. The problem with this line of analysis is that it seems to offer little policy advice. If something in the genesis of national development made Nigeria develop “bad institutions” while Botswana produced good ones, the only chance for Nigeria would be to transplant Botswana “good governance,” “property rights institutions,” and so on.

From a slightly different “institutions matter” standpoint, this paper argues that if there is a “curse” there is also hope of its reversal through institutional mechanisms. Resource-rich countries that have experienced the curse can learn from the disease and produce some form of “blessing in disguise” over the long run (Hirschman, 1971). But how can the curse be transformed into a blessing? A way to productively move the debate forward is to analyze how societies build institutional change and escape from resource curses over time.

3. NEO-INSTITUTIONALIST APPROACH AND METHODOLOGY

This article shares with the political resource curse literature the contention that “institutions matter,” but advocates a more nuanced understanding of the claim. By institutions, the article embraces the broad definition of the system of formal and informal rules, organizations, traditions, and belief-systems taken-as-given by relevant actors in a development field (Greif, 2005, 2006). The approach exposed here supports the view that policy gridlock cannot be insightfully explained if the observer dismisses the significance of institutions. But, as this article argues, one can acknowledge that institutions matter without assuming unconditional path-dependence. There is not just institutional continuity; there is also always institutional change (Thelen, 2003). Moreover, the making of institutional change is not uniquely or primarily the result of exogenous forces. Institutional change can be produced from within, on a piecemeal basis, through the rules, organizations, traditions, and belief-systems making up a particular institutional system (e.g., Carpenter, 2001; Hirschman, 1963).

The institutional argument about the making of curse-escapes is threefold and revolves on three concepts: path-dependence, networks, and agency. First, by definition, institutions are and feed continuity. In particular, early political economy conditions do matter for institutional pathways and later developmental outcomes. For instance, in resource-rich Peru, extended corruption during the boom-and-bust era of guano (1840s–1870s) left an enduring legacy of state and elite weakness. Secondly, path-dependent institutions can also change, often as a result of networks. For instance, in the secular weak-state of Peru, network-enhanced agents managed to
produce reasonable macroeconomic policy after late-1980s hyperinflation. Thirdly, the two institutional vectors just mentioned situate—and do not determine—policy agency. Neither the institutions-shaped propensity to continue nor the institutions-shaped ability to change determines choice. A handful of network-enhanced actors can find a way to change policy and so transform the institutional system surrounding them. The direction that change finally takes, however, cannot be fully predicted. Policy agents vary because beliefs vary; “opportunity structures” vary too. For instance, in 2001–2006 Peru, had the Pontificia Universidad Católica del Perú (PUCP) network of economists depicted below in Section 4 been more empowered within government, stronger counter-cyclical instruments could have emerged.

To better understand how institutions evolve, a bridge needs to be built between the recent analytical developments of historical institutionalism and those of the new sociological institutionalism (Hall & Taylor, 1996). The first school is fundamental for understanding what path-dependence entails; the second one illuminates the study of networks and institutional homogenization. A broad reading of historical institutionalism helps clarify that the recognition of institutional continuity cannot mean the neglect of institutional change. There are good reasons to expect actors in the field to nourish institutional path-dependence, from the evident returns-to-scale of using an inherited institutional framework to the not so evident cultural properties of tradition (Pierson, 2004).

But path-dependence needs to be qualified or else change cannot be accounted for. As recent historical institutionalism literature has highlighted, institutional evolution as “punctuated equilibrium,” an arrangement that endures unmodified until a “critical juncture” allows for a radical shift toward new equilibrium, is only one quite restrictive way of reading the history of institutions. Such a view tends to ignore the significance of piecemeal institutional transformations (Collier & Collier, 1991; Streeck & Thelen, 2005; Thelen, 2003). In principle and in practice, institutions can change both radically and slightly.

The understanding of institutional change is further enhanced when the insights of the new sociological institutionalism are taken into account. Institutions are not completely idiosyncratic, the result of particular experience that leaves an enduring self-feeding legacy. Institutions converge. States around the globe, in particular, have historically evolved to have similar mandates and organizational structures. Development policies converge too: for example, inflation targets and conditional cash transfers are used extensively across developing countries. New institutional theory in sociology has helped clarify that observed convergence is not necessarily or primarily the result of rational calculation of decision makers derived from a competitive setting (DiMaggio & Powell, 1983; Scott, 2008). For instance, if a way to deal with the resource curse diffuses, say the use of SWFs, this convergence might be the result of a constructed social structure that encourages norm diffusion, imitation, or coercion, rather than pure rational choice by national economic authorities over available technical alternatives. The embedding society matters for the way the state evolves. The way professional networks diffuse and recreate policy beliefs becomes central. The study of policy networks allows us to see the underpinnings of state institutional change: it is a handful of state authorities embedded in professional networks that give continuity and change to state action.

Path-dependence and networks situate rather than determine policy agency. The institutional approach framing our analysis does not have an over-deterministic reading of institutions. In the case of path-dependence, the way policy agents behave is shaped by the organizational resources and policy culture (or institutional endowments) that surround them. It is rational for policy agents to take advantage of the returns to scale provided by existing state structures. Moreover, policy culture leads state authorities through a “mental map” that they may not be aware of. In the case of networks, the way policy agents learn and develop strong policy beliefs is shaped by the professional networks they are part of. It is intrinsically logical to listen to and observe what prized peers are saying or doing. Thus, the argument is that two institutional vectors do have a lot to say about how public-choice unfolds. But state-makers do not need to strictly follow either state tradition or professional convention. Policy entrepreneurs can cross the line of what has been socially convened (Carpenter, 2001; Hirschman, 1963).

The capacity to change the way institutions evolve is not the sole province of the actors inhabiting either a formal institutional system or the social networks that embed it. This should be kept in mind when going through the cases in the coming sections, which focus on elite policy networks. Institutions can change through mechanisms not usually considered by institutionalist argumentation. Most evidently, institutions frequently change through the action of those who are not part of or do not feel represented by a formal institutional setting. Contentious collective action, in particular, emerges and endures when groups in society find no solution for their grievances in formal institutions. As in the case of institutions, however, the mere existence of discontent with a particular state of affairs is not enough to mobilize support and to guarantee success in changing an institutional setting. Opportunity and agency need to be brought in the analysis if one is to make sense of how seemingly negative structural conditions can be conducive to social transformation (Bebbington, Hinojosoa, Humphreys Bebbington, Burneo, & Warnaar, 2008; McAdam, Tarrow, & Tilly, 2001; Tarrow, 1998).

The approach and findings of this article are compatible with what quantitative-based empirics have taught us and help in refining resource curse theory. That case-oriented research can have a fruitful dialog with variable-oriented research and is suited for theory development is well-established (e.g., Ragin, 1987, 2008). To shed light on the hidden, the breadth of statistical-based analysis sometimes needs to be sacrificed for the depth of case-based analysis. Accepting such a trade-off makes perfect sense here, as the quantitative studies suggest that there is no universal rule about the impact of resources on institutions (e.g., Brunnswieker, 2008; Collier & Collier, 2009; Williams, 2011). Accordingly, the conceptual framework of the article is that of multiple equilibria, an evolutionary perspective to development (Hoff & Stiglitz, 2001). The same sort of origin can lead to multiple endpoints depending on interplaying, complex social dynamics. If many institutional arrangements are feasible out of the same structural setting, a productive way of framing new social inquiry is to ask why a political economy system ended up at a given historical point of equilibrium (that is, one point out of a potential range). The qualitative evidence can help us understand particular stylized pathways of institutional change within a wider realm of institutional possibilities. Such a close look at evidence can help in qualifying resource curse theory about how institutions change or fail to do so.

Two institutional vectors need to be fully unpacked to make sense of the claim that “institutions matter”: path-dependence and network-enhanced mechanisms. To explain the actual institutional pathway (one of many feasible) realized by the political economy systems of Chile and Peru, the article draws...
on the method of process tracing (Brady & Collier, 2004; Piersen, 2004). The processes leading to critical policy choices, such as the setting of countercyclical funds and the decisions over privatizing mining, are traced to understand better the public choices that structured institutional pathways. Process tracing of institutional continuity in Chile and Peru builds on historical analysis and to a lesser extent on interviews with key informants involved in state craft. Conversely, to explain the nuts-and-bolts of network-enhanced policy change, the analysis relies on interviews with key informants and to a lesser extent on analysis of historical research (Brady & Collier, 2004).

Finally, the comparative approach allows for an additional layer of analysis. These are two countries that make up two strikingly different “apples.” Although they share resource wealth, borders in the Pacific and a macro history of integration to the world economy, Chile and Peru have quite different political economy systems, varying in terms of social cohesion, political stability, industrial development, rural/urban divides, and more. And yet they have developed convergent policy principles for conservative macroeconomic management, countercyclical policy included. Thus, we need to account for their similar attempts to escape the resource curse, despite the contrasting structural conditions and institutional endowments that they have built over time. On the other hand, Chile and Peru diverged with respect to the actual form in which they globally diffused policy principles materialized. So we must also account for the differences in implementation that emerged despite the convergence of policy principles: Chile has built over-cautious rules of the game for spending windfalls, while Peru has not. The coming two sections present the findings in the form of a comparative analytical narrative of network dynamics behind institutional path-dependence and policy change.

4. POLICY NETWORKS AND THE REPRODUCTION OF PATH-DEPENDENCE

The histories of Chile and Peru offer rich illustrations of continuity as it applies to two contrasting mineral-state varieties. The human capital (expertise) and the social capital (network-enhanced capacities) generated by the elitist civil society of the 19th century favored the reproduction of relatively cohesive and relatively weak states in Chile and Peru, respectively. In Chile, the idea of order and progress, to be fostered by a strong, centralized state, left an institutional imprint, the “Portalian State.” In the 1830s, political stability and the cementation of a strong-Executive culture forged wide and dense self-reproducing networks of elite members who saw working in the state as a civic duty and a highly respected cementation of a strong-Executive culture forged wide and cohesive and relatively weak states in Chile and Peru, respectively. In the 19th century, networks of engineers had a significant influence on the development of the Chilean state. Engineers gained legitimacy with the expansion of railways during the nitrites growth cycle. They were behind the creation of national development corporation CORFO in 1939, which was funded with a special tax on copper and became the most important state organization in the interwar years (Ibarra, 1983; Silva, 2008). Progressively, economists made their way into the Chilean state too. Latin America—mineral dependent or not—has time and again called for the “scientific expertise” of “independent” foreign advice to cure public finances (Drake, 1989, 1994). The visit of an American economist worked as a device to ease the policy gridlock to tame inflation in Chile (Hirschman, 1963). The Bureau of the Budget (DIPRES) within the Ministry of Finance, the Central Bank, and the Superintendence of Banks, modeled on emerging American economic institutions, appeared on the scene in 1925.

The rising forms of technical state action created a demand for domestic expertise in Chile. Shortly after the Great Depression, the public University of Chile opened its School of Economics. The first generation of University of Chile-bred economists included the influential Flavio Levine, advisor of numerous state crafting initiatives, and Alvaro Marfán, the son of a state engineer, among others. They led the team at CORFO’s Finance Department which ran the first estimations of national economic accounts in the 1940s. University of Chile economists had in CORFO the ideal organization for a professional career. At the same time the journal Panorama Económico and diverse initiatives of the Catholic Church’s progressive wing offered a space for the development of a circle of economists. A central technocratic figure in the forging of economic bureaucratic autonomy was Sergio Molina. He became the first professional economist to occupy the post of director of DIPRES, University of Chile and Catholic University-bred economists also made their way into the Bureau of Planning ODEPLAN, created on the legacy of CORFO’s planning initiatives (Munoz, 1993).

The further professionalization of the Chilean state shows how state and society are divided by blurry borders. Founded by Christian Democracy technocrats with experience at ODEPLAN and the Central Bank, the Corporation of Economic Research for Latin America (Corporación de Investigaciones Económicas para Latinoamérica, CIEPLAN) became the heart of the policy network that supported the opposition to the Pinochet dictatorship (1973–1990). With the rise of Pinochet the Centre of National Planning Studies (Centro de Estudios de Planificación Nacional, CIEPLAN) at the Catholic University closed and its economists left the university to create CIEPLAN. Under the left-of-center Concertación governments (1990–2010), CIEPLAN furnished about two dozen of its former associates to fill the highest ranks of government (Jojnant, 2011; Silva, 2008). CIEPLAN had other networks to its right: the Chicago Boys and CEP. Chilean economists started to build networks at Chicago and other first-rate American universities in the 1960s. Established in 1980, the Centre of Public Studies (Centro de Estudios Públicos, CEP) is a think-tank financed by a domestic group with interests in various resource-based industries, a Chilean illustration of “embodied autonomy” (Evans, 1995). CIEPLAN and CEP developed a rich dialog of political economy doctrines and policy technicalities, documented in their journals Cuadernos CIEPLAN and Estudios Públicos, which helped build the policy consensus post-Pinochet.

In Peru, economic institutions and networks took a contrasting path. Engineers did not have the same chance to craft their state; the campaign for railways was unsuccessful and the political system preferred patronage hiring (Drake, 1989; Quiroz, 2008). No CORFO-like state organization came up
either. Until the mid-1960s, a semi-private institution collected taxes and made government payments, while the four-decade old Central Bank was run in a “empirical manner” (Kuczynski, 1977). Without much political continuity in Peru, the state did not provide economists with many opportunities to develop a respected and rewarding career. That said, there were some openings for técnicos. An important one was promoted by the back-to-democracy administration of Fernando Belaúnde (1963–1968). An economist in the early-1930s and member of the Christian Democracy Party (in the governing coalition), Javier Silva Ruete was appointed minister of agriculture—an important post at times of land reform diffusion. Trained at the Universidad Nacional Mayor de San Marcos, because no other university in Lima offered the degree of economist, Silva Ruete would become a central figure in Perú’s history of economic state craft, coming back to government as finance minister in the late-1970s and at the last return to democracy in 2000.

The smaller policy networks that have come out of Peru in the post-World War II era have been largely made up of técnicos rather than the technopols so common in Chile. In the mid-1980s, a network of centrist professionals formed Solidarity and Democracy (SODE), a tiny party. SODE aimed to support the rising García regime (1985–1990), but had no luck in becoming influential. SODE network members went on to create Macroconsult in 1985, a consulting group. Other influential think-tanks are GRADE (e. 1980) and IPE (e. 1994). All of them are made up mostly of professional economists from the private PUCP and Universidad del Pacífico, which opened their departments of economics only in the 1960s (three decades after the Universidad de Chile did so and when the network of Chilean economists had already reached Chicago and other American cities). In Peru, there is no public university feeding the reservoir of the public finance technocrats and analysts. Given the weak domestic network of economists and the inconstancy of national politics, governments in Peru rely on cosmopolitan financiers for the post of finance minister—a tradition that goes back to the 19th century boom-and-bust cycle of guano.

Networks create, adopt, and diffuse strong beliefs, such as beliefs about resource wealth and the role of the state in development. Chile was A Case of Frustrated Development according to the account of economist Aníbal Pinto. Frustrated Development (1959) captured the emotional state of political elites at the end of the era of world wars. Chile had succeeded in developing a relatively stable political system and a relatively successful economy in comparison to Latin American equivalents. Yet Chilean society did not converge to European society. It was not Latin America but Europe which served as the point of reference for political and policy elites. “We like to think of ourselves as the British of dark-skinned America. To judge ourselves, therefore, we can only use models that correspond to our most intimate aspirations” (Ahumada, 1970, pp. 13–14).

Next to Frustrated Development, Jorge Ahumada’s Instead of Misery (1959) became an influential diagnosis of the national political economy of development. According to Ahumada, who was connected to Raúl Prebisch and the founders of the United Nations Economic Commission of Latin America (ECLA), the misery of Chile was rooted in its inability to diminish the “structural forces” behind three quarters of a century of almost permanent inflation. Fiscal imbalances and inflation were rooted in structural global economy dynamics (Ahumada, 1970). Along with copper, a fundamental structural cause of “misery” was land tenure. Accordingly, the government of Frei Montalva carried out land reform and the nationalization of copper. The Christian Democrats could not stop inflation, though, which had been endemic since the era of nitrates-led growth. In the mid-1950s Saks-Klein Mission had succeeded in stopping inflation in Peru and advocated that inflation was a monetary problem, a view defended by the domestic political right. The “monetarist view” strengthened an opposing “structuralist view” of inflation. No policy consensus was in view.

Through the structuralists lenses used by Chilean development economists, copper was seen as a key “bottleneck” for national development, a structural feature that needed to be changed to realize development (e.g., Ahumada, 1970). Even the right-wing ended up supporting the rationale for nationalization of a seen as “strategic resource.” The military men who took over copper with Pinochet (1973–1990) were very critical of how the Socialists (1970–1973) had managed the industry (copper prices actually sunk in the period) but shared the conventional wisdom that copper was strategic and should stay state-owned. Hence, the military put together all nationalized companies under a unified Corporation of Copper (CODELCO). For sure, passions and interests blended under this title. The CODELCO law stated that 10% of corporate sales were to be assigned to the Armed Forces. But CODELCO was no novelty; it built on the shoulders of decades-long tradition of active and successful state involvement in the national economy.

Beliefs about resource dependence and the role of the state in Peru offer both similarities and differences, interlinked to wider political economy conditions. Even before the country’s nitrates were lost in war, Peru’s guano had been depleted, becoming a “textbook example” of a resource curse in post-colonial Latin America (Gootenberg, 1989). Guano offered rich illustrations of both Dutch disease and rent-seeking maladies, such as the impact on artisan manufactures and the corrupt distribution of windfalls to economic elites and military caudillos (Hunt, 1973; Quiroz, 2008). The most influential historian of the republic, Jorge Basadre, posited that guano brought “a fictitious prosperity” and that the failing and corrupt national elites proved to be “a dominant class, not a leading class.” The contrasting national ethnic divides come into play here. While in Chile the “problem of land” stood out as the most important structural problem impeding national development, in Peru it was seen by reformist elites as the “problem of the Indian.” When in the 1970s the Revolutionary Government of the Armed Forces seized the legendary Cerro de Pasco Copper Corporation, it did so both in the name of mineral dependence and “the problem of the Indian.” After seven decades of operation, the Cerro had become the largest landowner in the Andes. Accumulated land was redistributed to cooperatives of indigenous peasants and Cerro became the state-owned Mining Enterprise of the Center (CENTROMIN) (Becker, 1983).

By the end of the 20th century, state-owned enterprises in mining and oil were well-established institutions in Chile, but had become absurdities in Peru. While the successful performance of CODELCO in Chile fed the strong belief that the state could manage mining and oil enterprises, the failure of CENTROMIN did the opposite in Peru. In Chile, even state-owned enterprises with no luck in finding deposits, as in the case of the National Enterprise of Petroleum (ENAP) which ran oil operations everywhere but on national soil, had a reputation for professionalized and politically autonomous management. In the 1990s, then, while Concertación economists and engineers, from CIEPLAN and other
networks, took over the management of CODELCO in Chile, former-CENTROMIN engineers helped free-market economists to privatize mining in Peru.

Long incubated belief-systems mattered for the realization of national varieties of capitalism. By 1990, the emerging Santiago Consensus, that is the belief-system held by policy elites, demanded that the legacies of Pinochet’s “economic model” be respected: macroeconomic stability, aggressive trade integration, and business-friendly investment climate. Concertación (1990–2010) economists believed firmly it was time to finish the dialog of the deaf between monetarism and structuralism that characterized policy debate pre-Pinochet (Foxley, 1989). Being a small economy, “to trade or to die” was still the recipe, as Ahumada had articulated three decades earlier. But privatizing copper-giant CODELCO or the then small ENAP never appeared on the task list. After troublesome years of inflation and political violence, Peru ended up adopting a different variety of neoliberalism. The emerging Lima Consensus of 1990 (or more properly of 1992, when radical free-market economists undertook further control) was closer to the Santiago Consensus of 1973 (or more properly of 1975, when radical free-market economists undertook further control) than to the conventional wisdom held in post-Pinochet Chile. Besides, in Peru, there was no belief-system detaining the privatization of mining and oil.

The evolution of professional networks in both Chile and Peru throughout the 20th century incubated innovation and potential modifications throughout the state structures. Both countries show how economic management institutions in the state are shaped by the networks constructed within society. When the state ends and society begins is not clear-cut. To an important extent, the way mineral abundance or dependence impacts the political economies of Chile and Peru today has been mediated by the cumulative results of decades of policy agency embedded in professional networks.

5. TRACING THE MAKING OF CHANGE: NETWORK-ENHANCED AGENCY

The institutional environment per se is not enough to explain policy outcomes. By 2006, after close to two hundred years of post-colonial development, resource-rich Chile had produced an extensive and capable state, cohesive policy networks, and a widely shared narrative of national progress. However, the “good institutions” mineral-state of Chile experienced a developmental path that included episodes of boom-and-bust growth (and political instability or discontent) in the 1870s–1880s, 1910s–1920s, the early-1980s, and the late-1990s. So, it was not the path-dependent evolution of the mythical Portalian state, or the neo-Portalian state reform of Pinochet, that produced the cure for resource-related macroeconomic diseases. Institutions did matter for the rise of the 2006 copper funds, but in a subtle way. As explained by Peter Hall in his analysis of British economic policy in the 1970s, institutions did not fully determine policy outcomes, “but they structured the flow of ideas and the clash of interests in ways that had a significant impact on these outcomes” (Hall, 1992, p. 91). Chilean institutions built over decades of piecemeal policy craft, especially competent Hacienda and state-owned CODELCO, structured the path toward the 2006 copper funds. Table 1 traces the immediate events and long-term processes that enabled these policy innovations.

The immediate story of the 2006 copper funds goes back to a copper savings scheme created in the after math of the 1982 Debt Crisis. Free-market Chile suffered during the crisis because of an overly-indebted private sector that was hurt by the sudden stop of international capital flowing into Latin America. As in 1929, a world economic crisis punished Chile, GDP falling in −10.3% in 1982 and −3.8 in 1983. The IMF offered a rescue package and the World Bank gave technical advice in exchange for soft credit, the result of which was the Copper Rent Compensation Fund (CRCF), established in 1986. The CRCF illustrates how policy schemes and institutional legacies can develop from the leadership of individuals holding legitimacy or coercive power at a “critical juncture.” A brain-storming process took place to engineer new macroeconomic conditions for national development once copper prices had collapsed. The crisis became a “window of opportunity.” The original proposal came from the World Bank mission chief, who “had the idea that in Latin America we consumed all the money from booms (and liked to ask): ‘how could we make sure growth is sustainable?’.” Although the fund was small, the continuity of policy paradigms after Pinochet was gone meant that the CRCF did not disappear. After the 1997–98 international finance crisis, a countercyclical fiscal rule was a feasible policy innovation in Chile. The contribution of state-owned copper to the state budget had fallen from above 8% in 1991–1995 to 2% in 1998–99; but fiscal revenue, it was argued, was about to grow back since the long-term price of copper could not possibly be that of post-crisis 1998 or 1983. In such a context, the arrival of the first socialist president after Salvador Allende, Ricardo Lagos (2000–2006), was an event with potential turning-point qualities. Many believed that there was space to be less fiscally conservative, while still fiscally responsible. The Socialist leadership, however, believed otherwise. Lagos did not find it that difficult to self-impose the fiscal rule at the beginning of his tenure because he had already considered it for a long time. After Allende, the conversion of Socialists to economic doctrines friendlier toward the market economy started in the early-1980s. An economist, Lagos was a member of both the Socialist Party and the Party for Democracy, at the same time that he promoted Vector, a policy network constituted as a non-governmental organization. Nicolás Eyzaguirre joined Lagos both at the Party for Democracy and Vector. Before being nominated presidential candidate for the Concertación, Lagos knew Eyzaguirre would be his choice for a finance minister and Mario Marcel his DIPRES director. Marcel was a member of the Socialist Party and a former CIEPLAN researcher. Ricardo Lagos heard for first time of the “Structural Fiscal Balance Rule” in a private party, full of members of the Socialist policy network.

The fiscal rule established in 2000 was not a law, but rather a pure political commitment by the president and the finance minister. Building on methodologies produced and diffused by the IMF, a team of DIPRES technocrats officially proposed the use of a “public sector structural balance indicator” to show the fiscal balance that would have existed if GDP and copper price were at their “potential” and “medium-term” levels, respectively. Therefore, the argument followed, economic agents would be able to differentiate between different sources of impacts to the national economy: the ones brought on by international markets and the ones driven by domestic fiscal policy. The pressure for spending more in good years, the argument went, would decrease (Marcel, Tokman, Valdés, & Benavides, 2001). The fiscal rule limited the discretion for expansionary fiscal policy to 1% of “potential-GDP.” The key parameters, “potential GDP” and “medium-term copper price,” were determined by “committees of experts.”
committees of experts were composed of professionals with renowned academic credentials; science and reason dominated instead of partisanship.

The copper funds of 2006 then drew on the fiscal rule of 2000. At the end of the Lagos administration, the expectation was that the price of copper would rise once more and so new pressures for expenditure expansion would be felt by the incoming government. Out of technocratic concern about the sustainability of government expenditure and the defense of a competitive exchange rate for non-mineral exports, another pillar of the Santiago Consensus, the Fiscal Responsibility Law, was championed by new Finance Minister Andrés Velasco. Velasco was also the outcome and the maker of cohesive policy networks in Chile. The son of a politician, an economist trained in the US and a former collaborator of CIEPLAN, he is currently the promoter of the new technocratic network Expansiva. For Velasco, the informal rule of Marcel and Eyzaguirre had to become formal. The law made legally-binding the holding of a 1% “structural surplus” and created a Pensions Reserve Fund and an Economic and Social Stabilization Fund. These were the Chilean copper funds, a Chilean version of a SWF funded by commodity exports, adapted after the Norwegian model (Aizenman & Glick, 2009; Xu & Bahgat, 2010).

That CODELCO had not been privatized structured a path of high and volatile fiscal revenue; with the copper funds innovation, however, “the wage of Chile” became also the savings account. In the first decade of the 21st century, mining represented more than 18% of fiscal revenue and above 25% with prices rising sharply in 2005–2010; CODELCO contributed to about two-thirds of those percentages although it produced less than half of exported copper. But not all of the new fiscal revenue entered into the economy, unlike during the nitrates cycle a hundred years earlier. Figure 1 shows that before the 2006 countercyclical fund, Chile had been saving about 2% of its GDP by means of the CRCF—which helped to increase the fiscal impulse during the late-1990s crisis. The year after its approval, the equivalent of all the copper fiscal revenue was saved by this policy scheme. At the end of 2010, Chile’s countercyclical fund contained US$ 12,700 million; the pensions fund, another US$3800 million.

Institutions mattered in a subtle way, shaping choice by enhancing and constraining policy imagination and political possibilities. Like the Chile post-Pinochet, Peru post-Fujimori produced centrist coalitions with “third way” discourse of no inflation and social progressiveness. But unlike in Chile, it was hard for new leaders to muster the political and policy resources necessary to create escapes from the resource curse. At the ministry of economy and finance, head technocrats of the Toledo administration (2001–2006) had to spend long hours convincing each Congressman to support the annual budget laws, as politicians faced intense local pressure to provide funding for small infrastructure projects. Despite the economy kept growing, the Toledo administration included four finance ministers and four cabinet chief ministers (while in Chile there had been one finance minister per government since 1990). This meant a constant reconfiguration of policy power within government and the ministry of economy and finance. Therefore, the time horizons for creating and enforcing policy differed greatly between countries.

Policy networks in Peru were also not as large and cohesive as in Chile, although they still played a fundamental role in producing policy change. Oscar Dancourt and Kurt Burneo, who went on to become Central Bank governor

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tr>
<td>2006</td>
<td>Finance Minister Velasco champions the Fiscal Responsibility Law and copper funds</td>
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<tr>
<td>2000</td>
<td>Socialist President Lagos takes office; DIPRES team implements the “structural budget rule”</td>
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<tr>
<td>1997</td>
<td>International finance crisis hits the economy</td>
</tr>
<tr>
<td>1990–2010</td>
<td>Macroeconomic management and centralization continue; CODELCO is not privatized; one Hacienda minister per government</td>
</tr>
<tr>
<td>1986</td>
<td>Hacienda sets World Bank staff-advised Copper Rent Compensation Fund</td>
</tr>
<tr>
<td>1982</td>
<td>International finance crisis hits the economy</td>
</tr>
<tr>
<td>1980</td>
<td>Constitution cements laissez-faire orientation of the economy and centralization of the polity</td>
</tr>
<tr>
<td>1975</td>
<td>Government sets CODELCO to run large-scale nationalized mining</td>
</tr>
<tr>
<td>1973–1990</td>
<td>Pinochet tenure, end of democracy</td>
</tr>
<tr>
<td>1960s</td>
<td>Economists expand presence in American universities and international organizations</td>
</tr>
<tr>
<td>1950s</td>
<td>Economists increase presence in the state</td>
</tr>
</tbody>
</table>

Figure 1. Countercyclical funds as percentage of GDP. Source: Based on data from the Ministry of Finance of Chile, the Ministry of Economy and Finance of Peru, and the World Development Indicators.

Table 1. Tracing institutional change: critical events and shaping processes behind the Chilean copper funds
and finance vice-minister, respectively, entered the technocratic circle of Toledo in 1999 to work on the “Plan to Leave the Crisis.” They were PUCP professors and publishers of the *Actualidad Económica* journal, critical of Fujimorians. Over time, Dancourt and Burneo brought on board other PUCP colleagues, who were appointed to key economic management positions. The network eased the coordination of macroeconomic policy: new Central Bank authorities wanted to de-dollarize the economy, to use the interest rate as a countercyclical policy instrument, and to accumulate reserves to defend the economy from speculative attacks (*Dancourt, 1997*); new economy and finance authorities wanted countercyclical expenditure and to build policy capacity in-house. In the 1990s, fiscal policy was designed by the council of advisers of the finance minister or borrowed Central Bank officials.21

Fiscal Responsibility Laws and stabilization funds reached Peru through an idiosyncratic path. The late-1990s financial crisis was the window of opportunity for passing the Fiscal Transparency and Responsibility Law in 2000, which gave birth to the Fiscal Stability Fund, a savings account for countercyclical fiscal policy. Illustrating the nuances of policy diffusion, technocrats, led by decade-long adviser José Valderrama, asked their World Bank colleagues to include the law as a conditionality.22 The fiscal rule was an important milestone, and the PUCP technocrats who came to office after Valderrama tried to go beyond it by pushing for a stabilization fund law in 2005—06. The idea was that the state would save 10% of the mining windfalls allocated through the *canon* scheme. The origin of the *canon* can be traced to contentious collective action of the 1970s, which demanded the redistribution of oil and mineral rents from the rentier center (Lima) to the producing peripheries. The technocratic proposal to save more did not get a green light from political leaders, however.23

Like Lagos in Chile, President García (2006–2011) did not want to repeat the errors of the past. This is where the resemblance ends. The old populist APRA party, responsible for the late-1980s hyperinflation, had never been an attractive environment for professional economists, and García looked for legitimacy and expertise elsewhere. The five appointments for finance minister positions were technocrats who worked for the previous administration, an IMF economist, and a businessman. For the Central Bank’s board of directors García appointed a mix of business leaders, non-economist technocrats, and economists that the business elites could trust. By contrast, in Chile, the informal rule is that economists and only economists can be appointed as a Central Bank board member or as finance minister. The field for guaranteeing fiscal austerity was stable in appearance but chaotic underneath, full of suble everyday battles with internal discontent and with the populist President.24 In summary, Peru has an unstable political system, technocrats with none or soft political attachments, and relatively loose networks of professional economists of constrained legitimacy power. Chile has the opposite. Hence, despite the steps taken under Valderrama and later, a policy innovation of the scale and transparency of Chile’s copper funds still looks unfeasible to most powerful actors of Peru’s policymaking arena. Peru also shows little propensity to save a decade after establishing the Fiscal Responsibility Fund; policy caution increased only in 2008, when the global crisis had already started. Fortunately, Peru got better lottery tickets than usual: unlike 1982–83 and 1997–98, there was no El Niño to accompany the financial crisis and the price of gold kept rising.

6. CONCLUSION

The resource curse should not be read as destiny but as a temporary equilibrium, no matter how long it stands. Certainly, mineral dependence can create a development culture and political economy incentives that favor the “mineral-state” status quo, apologetic of short-sightedness, rent-seeking, and corruption. Over time, this pattern can become an institutional trap. As evidenced by this case study, however, institutional structure shapes but does not completely determine. Comparative analysis of mineral-dependent Chile and Peru shows that resource-shaped state institutions are sticky but also subject to change by means of network-embedded agency, and that institutions matter not by determining outcomes but rather by framing choices and shaping preferences of agents in the field. There are three policy lessons we can draw from this analysis. The first is that no matter how institutionalized, the “rules of the game” are subject to change, generally on a piecemeal basis under everyday conditions, but also with help of extraordinary events (global financial crises, systemic political shifts and natural disasters) that open wider windows of opportunity. Second, that the cohesiveness and political reach of (globalized) policy networks create better environments for policy debate and innovation. And lastly, perhaps paradoxically, that to change national institutions it is of much help to draw on national institutions.

“Mineral-states” learn, or fail to do so, through a dense institutional process in which policy networks can be critical. State action can be modified by virtue of social forces, be them the elite kind (e.g., elite activism behind the countercyclical policy schemes in Chile and Peru), the grassroots kind (e.g., grassroots activism behind resource-rent redistribution in Peru—or the Chilean students movement that demands the end of “the education of Pinochet”), or possible hybrids. With a multiple equilibria evolutionary framework, it is clear that a curse-escape led by elites through policy networks is just one stylized pathway in a range of possibilities. Wider political participation in policymaking is possible and could be desirable. In fact, Chile shows how the distinction between *político* and *técnico*, therefore state and society, is blurry, since the same policy actors go from one identity to the other, or keep both, throughout their lives. Networks of well-trained professionals either lead state action or influence it by means of elite civil society action. Then, the process of learning from curse-experience is not constrained to a handful of experts but reaches the wider political system. In turn, experts gain political legitimacy and receive support from the political leadership to influence the re-creation of state action. Over the long run, network activism leaves behind organizational resources and policy traditions as institutional endowments.

Does the way policy networks learn produce optimal policy, if there is such a thing? Not necessarily. “Good institutions” can produce “bad,” or “sub-optimal,” policy. To begin with, the development field is not a clean, simple lab, where variables can be manipulated at will. Policy networks, moreover, do not always have all the theoretical and evidence-based knowledge that many—inside and outside them—assume that they have. So norms, mimesis, and coercion can diffuse non-factual beliefs and bad medicines. And there is more. While beliefs shape behavior, private interests also play a role. All policy experts face individual economic and political incentives, which can lead to conscious concessions of reason to interest—or to unconscious mental shortcuts. The interests of those on the top, finally, can be disconnected from those...
at the base. In short, the technical is never purely scientific or purely a-political. But correct or not, participatory or elitist, professional networks clearly have the power to shape the production of policy in the economic institutions of the state. When properly cultivated, networks become an asset for the building of curse-escapes and wider development possibilities.

In-depth case studies contribute to the curse literature by providing the fine grain of processes and mechanisms behind the building (or not) of curse-escapes. From studying the success and failure of particular institutional pathways, the development studies community can gain new traction in understanding the challenges and possibilities of resource-based development.

NOTES

1. I also disagree with Kurtz (2009) on the arguments that Chile and Peru shared “similar economic structures” and that Peru started the independence era with a firmer institutional foundation (pp. 479–480). Post-colonial economic structures were not similar since economic geography (including size and diversity of territory), ethnic composition and land tenure, internal market integration, and the size and composition of the export economy were all different—the similarities being that both countries exported minerals (copper and silver in the 1830s, respectively) and held mountains and forest frontiers (subpolar and tropical ones, respectively). On institutional foundations, the Chilean state had a better control over its (smaller and less complex) territory, as indicated by the quality of early national statistics. I agree that the sequencing of strong state-building before the nitrates boom cycle in Chile left a positive legacy for 20th century state development, unlike the weak-state first, guano boom next sequence in Peru (Paredes, 2012).

2. Sections 4 and 5 draw on Orihuela (2012) for the case of Chile.

3. Interview with Edgardo Boening (Santiago, August 16, 2007).


5. Interview with Javier Silva Ruete (Lima, December 16, 2008).


7. Interview with General Gastón Frez (Santiago, August 27, 2007).


9. Interview with Juan Andrés Fontaine, Central Bank’s Chief of Economic Studies at the time of the CCF, Santiago, August 10, 2007.

10. Lagos recalls the one meeting at a Catholic church when a comrade contended that “maybe private banks and firms were not a bad idea.”

11. Nicolás Eyzguirre is a University of Chile economist with doctoral studies at Harvard.

12. Mario Marcel is a University of Chile economist with doctoral studies at Cambridge.


15. See COCHILCO Yearbook 2010, Tables 2.2 and 32.2.

16. See Sovereign Funds Annual Reports, available at http://www.minhda.cl/. The 2009 report takes pride in the fact that Chile announced the world’s second largest extraordinary fiscal stimulus to counteract the global financial crisis (US$ 4,000 million, about 2.8% of GDP).

17. Chile has a ministry of the economy independent from the ministry of finance, given the strong formation of developmental state structures.

18. Interviews with Nelson Schack, first director of the Bureau of Budget (Dirección Nacional de Presupuesto Público, DNPP) of the Toledo administration (Lima, July 17, 2008), and Kurt Burneo, deputy minister of finance (Lima, July 21, 2008).

19. Interview with Oscar Dancourt (Lima, May 27, 2008).

20. Interviews with Burneo and Waldo Mendoza (Lima, May 27, 2008).


22. Interviews with Schack, Abugatás and José Valderrama (Lima, August 18, 2008).

23. Interviews with Mendoza and Hillman Farfán (Lima, June 30, 2008).

24. See Revista Poder, June 1, 2011.

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