How do Mineral-States Learn?
Bounded Policy Entrepreneurs and the Rise of the Copper Funds in Chile

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What makes that some resource-abundant countries manage to escape their “destiny”? Using an historical institutional approach, I show why and how Chile established its copper funds, providing financial resources and policy credibility to manage the 2008-2009 crisis. Seeking to draw from the “lessons of history” on inflation and instability generated by mineral-dependence, facing the everyday contingencies of economic policy management, state actors crafted new fiscal rules heading to the 2006 copper savings funds. Mineral states are more likely to learn from past successes and failures when the political arena favours the reproduction of long-term minded state agents. Bounded and enhanced by their institutional legacy, policy entrepreneurs recreate path-dependency.

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Introduction

How do mineral-states learn? If resource abundance feeds myopic and rent-seeking behaviour, what makes that some resource-abundant countries manage to escape their “destiny”? The resource curse is a name used to call a wide range of poor-quality development phenomena: unsustainable growth, volatile growth, enclave development, conflict-prone politics, rent-seeking economic culture, and so on (Sachs and Warner, 1995; Karl, 1997; Ross, 1999; Collier and Hoeffler, 2005). Scholars favour the view that the answer to the resource-curse is to be found not in the seen-as-given resource endowments, but in the seen-as-malleable institutions and policies (Ascher, 1999; Barbier, 2005; Humphreys et. al., 2007). The puzzle of the resource curse is to understand why policymakers of mineral-states do not borrow and experiment wisely. While in theory failing societal patterns are all reversible, historical research shows that they turn persistent. In a vicious circle, old social failure feeds new social failure: actors seem unable to find a way out (Karl, 1997).

The case of mineral-rich Chile, however, does not fit well a stylized resource-curse narrative. Created by the Bachelet administration in 2006, the copper funds were set to save revenue from the good years in order to spend it in the bad ones. The forward-looking scheme gave resources and credibility for macroeconomic management during the 2008-2009 financial turmoil. Against what the resource curse theory predicts, behaviour was not myopic. I trace the institutional foundations supporting the contemporary success story using the toolbox of historical institutionalism (Collier and Collier, 1991; Thelen, 1999; Mahoney and Rueschemeyer, 2003; Pierson, 2004). In my analytics, social outcomes result out of a range of structural conditions, historical circumstances, and embedded action; in short, legacy, contingency, and agency (Orihuela, 2010). The remainder of the article
is organized as follows. Section 1 reviews the age of the Ministry of Interior (1830s-1930s), the institutional legacies of strong-state formation in conditions of resource abundance. Section 2 traces state evolution in the age of CORFO (1930s-1960s), when developmental machinery was built on top of the pre-existing architecture. Section 3 depicts the age of the Ministry of Finance (1960s-today), when economists became the leading voice of experts in the state apparatus. Section 4 gives a full account of how the copper funds emerged as result of piecemeal policymaking in the aftermath of international financial crises (1982 and 1997), the upcoming of the first socialist president after Salvador Allende (2000), and a juncture of rising copper prices and a new presidency (2006). Section 5 concludes reflecting on how mineral-rich countries can escape the curse.

1. The Age of Interior, 1830s-1930s

Post-colonial Chile has always been a “mining-country,” but the label describes different historical phenomena. Mining country means a first copper cycle (1800s-1880), a nitrates cycle (1880-1930s), and a second copper cycle (1930s-today). As Chart 1 shows, mineral dependence measured as the mining share of total exports reached historical highs over ninety percent in the nitrates cycle and historical lows above forty percent in the 1990s—after the new export economy developed and before the latest mining boom switched the trend. Hence, a first lesson of history is that mining-dependence in post-colonial Chile has been a non-homogenous process, with volatility and continuity.
History allows qualifying sometimes blunt theoretical contentions. One such argument is that original conditions explain on their own path-dependent outcomes. “Geography” and “resource abundance” can be two of such variables commonly treated as if exogenous endowments (Rodrik et. al., 2004; Sachs, 2005). When looking at history one finds that industrial economies were all resource abundant in some kind and at some point. Among resource-rich nations, history shows how abundance can also be the outcome of nation-state agency. In the name of national interests, in 1879-1883, Chile took Atacama Desert territories of Bolivia and Peru. International prices, private investment, and technological innovations would show such territories were mega-rich in copper. In search of national progress, given that agricultural land was limited in the Central Valley, after winning the War of the Pacific, the Chilean Army went south “to pacify” the southern Mapuche-inhabited forests. At the end of the 19th century, the newborn nation-state of Chile had more than doubled its territory from 321,462 to about 750,000 sq km, seizing minerals and forests.
Strong state and state activism are historical outcomes of relatively cohesive Central Valley elites of the early nineteenth century that needed of collective schemes to control and transform the national territory. When the 1870s “globalization crisis” pushed the Chilean elites to seize new lands and resources, there was already a state at hand for the operations. The Conservative Republic (1830s-1850s) carried out the positivist dreams of the rule of law, along with the strong state to enforce it, and the scientific management of public affairs. Statesman Diego Portales referred as “the weight of the night” to the capacity of state institutions to determine national destiny. He was the vocal preacher of the ideology of elite-rule, epitomized decades later in the national motto “by reason or by force” (Collier and Sater, 2004). The Conservative Republic of Portales brought “the religion of the omnipresent Executive” and the legacy of a “sacerdotal cast” of statesmen (Gongora, 1986 [1981]: 42-48), the cultural roots of contemporary technocratic elites working for the state “in the name reason” (Silva 2008). Since very early, helped by the relative political stability, men of science, engineers, and lawyers made their way into the public system, recreating political elites, state-business relationships, and the bureaucracy.

The myth of what Chilean elites to our date call “Portalian State” is both the outcome of the objective legacies of early nation-state formation and military expansionism in conjunction with the subjective nostalgia in times of political and economic crises. The Conservative Republic imposed law and order after two decades of post-independence civil wars. Later, the pre-emptive wars against Bolivia and Peru were fundamental for the development of a strong national identity (Gongora, 1986 [1981]). Portales was the mastermind advocating to stop the unification of Bolivia and Peru in a confederation, which was against the geopolitical interests of Chile in the Pacific. Four decades after his death, the “spirit of Portales” was present when Chile
went again to war against Bolivia and Peru, which were this time trying to tax and to nationalize nitrates in hands of Chilean capital. Such would have been ruin for the Chilean state, suffering from the abrupt end of the copper and wheat cycle (Sater, 1979). In the civil wars of the 1850s and 1891, and the hectic early-twentieth of unstable nitrates, political elites idealized and missed the good years of Portales (Edwards 1927; Encina 1934; Góngora, 1981; Jocelyn-Holt, 1999 and 1998). With a successful nineteenth century for nation-state development, political leadership could appeal repeatedly to the good times of law and order, and therefore the need to safeguard and strengthen the “national institutions” to escape chaos.

Since the Conservative Settlement, strong state has meant high presidential powers, supported by appointed intendantes as political authorities in the provinces. Typically, Latin American countries started their republican governments with three secretaries of state: Government (Interior) and Foreign Affairs, Finance, and War. The 1833 Constitution brought back the prominence of the intendencias, declaring the intendente to be the “natural agent” of the President of the Republic. The strengthening of the intendencias was direct outcome of the early strengthening of the central state. In 1844, the state passed the Law of Interior Regime. In the next decades, the laws creating municipalities for local government respected the superior political hierarchy of the intendentes (Figueroa, 1953). The legacy of strong central state in hands of Interior officials had been established. A consequence of the victorious military history in the nineteenth century was the need for guaranteeing the occupation of the territory and the control over resources. During the 1880-1920s, nitrates represented some 40% of fiscal revenue and thus allowed a new expansion of state reach, in the form of railways infrastructure and education as well as in the fostering of colonization and entrepreneurial activities in the subpolar forest (Cariola
and Sunkel, 1985; Camus, 2006; Soifer, 2006). All of these new state ventures meant more executive responsibilities for the intendentes. The successes of the young nation-state of Chile meant the legitimization of the intendente and the Ministry of Interior.

Long-term perspectives of national development have the disadvantage of portraying too much of a snap shot, in which temporal variation and internal differences appear inexistent or look minimal next to the big-picture. As a main narrative, the nitrates cycle can be discussed in terms of its successes. For instance, Palma (1979) explains that a Dutch-disease did not take place in Chile because the state appropriated the resource-rent and spent the resources wisely on railways and education, avoiding the appreciation of the exchange rate. However, if the period is discussed in short-term perspective, the enthusiasm for economic outcomes looks overstated: the nitrates cycle was also a period of major economic and political instability, partly consequence of, partly fuelled by the dependence on volatile nitrates. Chile’s nitrates-based development of the turn-of-century brought economic progress hand-in-hand with conflict and insecurity, a “resource-curse” of civil war, hectic politics, foreign debt, and inflation.

It times of economic and political difficulties, the Executive—Interior within it—kept accumulating powers vis-à-vis the Parliament. Advised by the Kemmerer Mission, devoted to spread the gospel of good governance for public finances in Latin America, the 1927 reform brought the Contraloria General de la Republica, the Central Bank, and the Treasury Department (Direccion de Presupuestos, DIPRES). Under military influence, the general state reform also set the contemporary version of Interior’s duties to be the political management of the territory, internal security

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2 The Contraloria was designed to be change and continuity. See Arrieta (1979).
and electoral affairs. In 1942, the role of the intendentes and the Ministry of Interior was further consolidated: a regulation established the ministerial rank for times that the President of the Republic was absent of the country: Interior, Foreign Relations and Economy, and Trade—Finance only came next (Figueroa, 1953). With labor movements in the rise and the nitrates industry in volatile progress, strong state also meant iron-hand repression of workers (Angell, 1972).

2. The Age of CORFO, 1930s-1960s

Industrial policy was not an invention of 1914 or 1929. Such “external shocks” gave new impulses to processes in motion. The politics of economic diversification started developing since the birth of republican Chile, rising in the mid-nineteenth century, when private interests needed the state to foster the expansion of agriculture and the colonization of forests, and expanding further at the turn of the twentieth (Ortega, 2005; Camus, 2006). The call and the action for diversification and industrialization acquired new forms with the nitrates cycle (Pinto and Ortega, 1990; Muñoz, 1968 and 1987). With a third of the population living between the port of Valparaiso and the city of Santiago, the economic interests for industrial development were in the rise. The Great Depression gave new impulses to the old idea of setting up a national development corporation. Politics, however, were all very hectic and no consensus was reached on the matter. The critical juncture for the creation of CORFO (Development Corporation) finished configuring with the tragic 1939 earthquake. The Congress approved the creation of CORFO within the discussion on how to reconstruct the country. A year before, the Popular Front, a left-of-centre alliance headed by the Radical Party and aiming to oppose the expansion of domestic fascism, had reached power. Yet, CORFO came out of the politics of compromise:
unionization in the countryside was forbidden as the oligarchic agricultural interests demanded (Loveman, 1976; Silva, 1994). Legacy and contingency opened a particular window of opportunity for Chile’s developmental state.

CORFO represents as no other institution the spirit and capacities of the Chilean state in the interwar period. CORFO was created as an autonomous institutions within the Executive, which meant that it had right to have a corporative patrimony and was subject to a special legal status, in many ways a para-state organization. Its first patrimony came out of a special tax to copper (Reynolds, 1965). CORFO’s autonomy from short-term politics meant that its bureaucratic decisions were not directly dependent on sectoral ministers or the President of the Republic. State crafters designed CORFO to be an institution to engineer development, not to play politics. Rather more important than what its law established, political authorities decided to be so, respecting its autonomy within the general guidelines of the government agenda. It did not develop on the free space, but upon legacies of the state and the society, such as the reach of the Ministry of the Interior and the engineers of railways, state institutions, and the private sector (Ibañez, 1983; Muñoz, 1987; Ortega et. al., 1989). CORFO’s first priorities were electricity and steelworks, then all sorts of new industries. The development corporation was involved in the embryonic developments of all the new-exports that emerged in the post-war: fruits, vegetables, wine, pine wood, salmon, “Chilean sea bass,” and so on. With time, CORFO became a data bank of maps, statistics, resource inventories, soil studies, marketing studies for national products, and projects to introduce profitable crops, forestry products, and fisheries (Ortega et. al. 1989). State mapping of ecosystems and natural resources was not an absolute novelty, but an upgraded continuation of the work of Interior and Promotion. The fostering of the forestry industry provides plenty of examples (Camus
The modern Chilean state led Latin America in industrialization policy. After decades of experience driving state-corporatism, Chile was fundamental in creating regional think-tanks and financial institutions for development. In particular, Chile pushed the Economic and Social Council of the United Nations to approve, in 1948, the creation of the Economic Commission for Latin America. Santiago hosted the first round of meetings and would eventually be chosen as the headquarters for ECLA (later ECLAC) (Urquidi 2005).

Once again, the focus on the big-picture of achievements may ignore the problems and shortcomings of what ends up being called a “national development strategy”. Or so the Christian Democrats believed, who emerged to occupy the place left by the Radicals. For the technocrats and politicians of the Frei Montalva administration (1964-70), CORFO had become an immense octopus that needed control on top. Thus, in 1965, the state created ODEPLAN (Bureau of Planning), the agency in charge of giving a long-term perspective to state action, that of CORFO in particular. Created within CORFO, the government made ODEPLAN an autonomous agency two years later.³ CORFO needed to have priorities because it could not possibly embrace it all. An agency that reported directly to the President of the Republic, in six years the Christian Democrats made of ODEPLAN the leading institution for development planning. The agenda of Frei Montalva, of course, went beyond development planning and expenditure, the region was leaving a new age of expectations (Ffrench-Davis, 1973). In post-war, post-Cuban Revolution Latin America, new political voices debated about the structural reasons of underdevelopment.

³ The national accounts statistics were carried by CORFO in the period 1940-63 and Odeplan in 1960-70. See Annex II in Ffrench-Davis (1973).
After decades of rising taxes over mining, in hectic manner (Reynolds 1965), Chile ended up nationalizing copper. In 1955, Chile offered a new deal to multinationals in order to increase investments in the industry. However, the lowering of taxes came out with a national twist: the creation of the Copper Department within the Ministry of Mining (Camus, 2005). The Copper Department was to be in charge of promoting a strategic vision for the national copper industry. The new tax scheme did not do much and so political elites kept unsatisfied with the velocity of mining expansion. The end of the Korean War reversed the post-war positive trend of copper prices (see Graph 3 below) and so by the late-1950s the contribution of old copper (Chuquicamata, El Teniente and El Salvador) to the treasury fell significantly, as Graph 2 shows. In *Instead of Misery*, the influential political diagnosis and technocratic platform written by Christian Democrat Jorge Ahumada, copper-dependence occupied central parts (Ahumada, 1960). To develop more and redistribute more, exports needed to lead the way; but foreign-owned copper had not been investing as required. The end of the century-long inflation demanded to face copper volatility and fiscal dependence. Yet, it had to be “a revolution in liberty,” unlike the one the admirers of Cuba proposed. The Frei Montalva administration started the “Chilenization,” first, and the “agreed nationalization,” later, of all big-copper.4

4 The Christian Democrats had its left-wing, with more nationalistic and interventionist views. See Tomic (1988).
The socialist government of Allende (1970-3) pushed the pendulum further, making of copper “the wage of Chile”—but there was little of a wage during nationalization. The Unidad Popular (Peoples’ Unity) administration pushed for full-nationalization without compensation for expropriation: the revolution demanded other objectives, rhythm, and alliances. The nationalization of copper was approved by all political forces in Congress. In most other aspects, however, the Allende regime alienated the reformist political centre. CORFO, in particular, lost its technocratic autonomy because the socialists distrusted the old bureaucracy. Moreover, the government undertook an across-the-board nationalization of business, which were all of to be managed by CORFO. Presumably most of the centrist technocracy was relieved with the end of the socialist experiment: many Christian Democrats were collaborators of El Ladrillo (The Brick), the economic alternative to the Unidad.

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5 Maritza Paredes provided her valuable interview material with former CORFO chiefs and officials, including Sergio Molina.
Popular economics, and participated in the first technocratic teams of ODEPLAN and the Ministry of Finance during the dictatorship.  

3. The Age of Hacienda, 1960s-today

As CORFO and ODEPLAN had not been out-of-scratch inventions of the Radical Party and the Christian Democracy Party, respectively, the decisive strengthening of Hacienda (Ministry of Finance) by Pinochet’s Chicago-Boys also built on preceding processes. In Chilean fashion, the technocratic capacities of Hacienda do not depend solely upon external committees of experts, but on the technocracy of the Treasury Department DIPRES. In 1960, the status of DIPRES was upgraded with a law that established its main role to elaborate the national budget “in the context of the plans for social and economic development and other national objectives.” A year before, during the tenure of Sergio Molina, a number innovations were introduced in order to modernize the budgetary process, including the coordination with CORFO of the priorities for public investment expenditure (Molina, 1972). In 1964, when the Christian Democrats became government, Molina became minister of finance for five of the six years that lasted the administration. The Christian Democrats upgraded DIPRES in conjunction with its newborn ODEPLAN. After the Unidad Popular, the Chicago Boys operated from the inherited institutions, ODEPLAN and DIPRES. A new generation of technocrats was financed by the Presidential Scholarship, a scheme for young ODEPLAN and Hacienda economic analysts. Chile’s neoliberalism-before-

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6 In the 1973 the military offered Sergio Molina, a high-rank technocrat of the Frei Montalva administration, to be the Vice-Minister of Finance, but he rejected the call (Valdes, 1989:14). Other economists close to the Christian Democrats quarters joined the military regime (interview with Juan Villarzu).
7 Art. 1, DFL-106 (1960).
9 Interview with Edgardo Boeningher.
neoliberalism was designed and carried within the planning institutions of a strong state.

During the Pinochet regime (1973-1990), Hacienda gained in technical capacities and political power, especially since the 1975 fiscal reforms that unified the control of public finances in the Ministry and, more specifically, in DIPRES (Vial, 2001).\textsuperscript{10} It was the end of most fiscal autonomies, but state agencies with own patrimony such as CORFO still kept significant margins of manoeuvre. The power of DIPRES was further cemented by the 1980 Constitution, which constrained heavily the powers of Parliament over the national budget and the creation of new taxes, as well as by the Concertación praxis, eager to show that democracy under a centre-left coalition could be more fiscally responsible than the dictatorship (Foxley, 1989). Hacienda and ODEPLAN economists gained autonomy within the state apparatus, but autonomy had its limits: copper. Thus, a diverging evolution in Chile to state-downsizing and the strengthening of the Ministry of Finance was the decision to keep copper state-owned. Free-markets capitalism could not reach as far as privatizing what the military consider strategic for the nation: not only copper, petroleum or electricity, but also CORFO, the development corporation, subject to large-scale reengineering, but not erased from Earth.\textsuperscript{11} In 1976, a furious Pinochet phoned Hacienda Minister Sergio De Castro after a functionary had declared to the press on the convenience of privatizing copper: the autonomy of economists had its limits (Arancibia and Balart 2007: 248).

\textsuperscript{10} Ley Organica de Administracion Financiera del Estado, DL 1263 (1975). See Vial (2001) for a documented discussion. Joaquin Vial was the director of DIPRES during the second Concertacion administration.

Both the military and the economists wanted the best for Chile, which was understood as “ending communism and bringing in capitalism”. But still with such a shared mindset, there was much space for divergence since the belief-systems on—in economics jargon—what constitutes the social welfare function and how it can be optimized were not the same. The military taking care of copper, therefore, had its time for settling down, learning the business and accumulating political power. Once the radical “market-economists” took full command on the management of economic policy, at the juncture of the oil crisis, the clash of visions was more severe. Gaston Frez, a military officer who became the key figure of the history of CODELCO headed the opposition within government.

In 1976, the Pinochet regime passed a law creating CODELCO, a corporation unifying all the nationalized enterprises. It came along with a small but to-become influential institution, COCHILCO, today a transparent data bank and handy think-tank for the industry. Appointed Vice-President of Marketing and facing the brain-drain that occurred with the nationalization, Frez selected a group of the “best young talented professionals” of CODELCO, aiming to create a high sense of belonging and patriotism. CODELCO developed with autonomy to become a like-private run enterprise. Once again, nuances matter to understand fully the “success story”. Copper was meant to be “the wage of Chile.” By law, therefore, all profits of CODELCO were to go into fiscal coffers. This funded the state but left the copper corporation

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12 “(Allende comes with) the ideas of Fidel Castro, the ideas of the armed revolution… he brings the ideas of Russia and he undertakes the communist-socialist tutelage… Castro comes to Chile for some days and ends up staying a month… For us, that were military and understood the things as a country, it was frightening” Gaston Frez. For the views of the radical economists, see Fontaine (1988), Valdes (1989), Arancibia (2006), and Arancibia and Balart (2007).

13 Laws 1349 and 1350 (1976) --“We conceived COCHILCO as an institution that was going to oversee private investment to come in the future”, Gaston Frez. Law 18940 (1990) constrained its regulatory mandate to the supervision of CODELCO. During the Concertación era, COCHILCO evolved into a generator of information, analysis and ideas for the promotion of the public and private industry and its defense in international markets –given the growing importance of environmental regulation for trade.
without capital for new investments. In addition, Pinochet earmarked 10% of sales for military expenditure, an institution that has also survived two decades of democratic administration.

The dictatorship was rich in institutional innovations within continuities, which were not constrained to economic management aspects. Many reforms took place within the Ministry of Interior, strengthened for the double function of “guaranteeing order” and expanding the reach of state services and investments. Thus, political re-centralization and bureaucratic de-concentration took place. In 1974, the administration established thirteen administrative regions to be managed by the intendentes, now military men. The intendentes were in charge of coordinating state action of the Regional Ministerial Directorates (Secretarias Regionales Ministeriales, SEREMIs), the regional offices of the ministries. Thus, SEREMIs were formally dependent on their respective ministries, but politically responsive to the more than ever all-powerful intendente. The 1980 Constitution backed once again the institution. With the return to democracy, the Concertacion gave to the intendente some counter balance force in a regional congress integrated by all provincial mayors—now democratically elected. However, regional congresses are still presided by the intendente. Regional elections have not had support from Santiago-based elites, regardless of political persuasions. The strengthening of Interior beginning the Pinochet regime included the creation of the Under-Secretary for Regional and Administrative Development (Subsecretaria de Desarrollo Regional y Administrativo, SUBDERE), established in order to provide technocratic support to regional-level state action. The SUBDERE would become a fundamental institution for development planning and spending down the road with the Concertacion. The daily duties of SUBDERE range from coordinating executive work with intendentes, majors, and
CORFO officials to the advising, implementing, and overseeing of ad-hoc policy schemes such as the National Fund for Regional Development (*Fondo Nacional de Desarrollo Regional*, FNDR), rural infrastructure projects, and a range of development programs (Angell *et. al.*, 2001; Eaton, 2004; Aninat *et. al.*, 2006).

With the end of Pinochet, the “Chicago boys” were replaced by the “CIEPLAN-monks”, as referred by Silva (2001), a highly-cohesive group of technocrats who articulated the *Concertación* economic vision. Supported during the dictatorship by the international cooperation, the non-partisan, pro-democracy, economists-led CIEPLAN not only became a policy think-tank for the *Concertación* political project while it was maturing, but created the space for intergenerational dialogue and the formation of a new generation of statesmen.\(^\text{14}\) With the new political scenario, its policy focus and influence diminished, as the centre even closed for a period of time, and more recently its space has largely being occupied by Expansiva, a network for technocratic policy discussion, dominated by a younger generation with a discourse of political neutrality, led by Bachelet’s Finance Minister Andres Velasco.\(^\text{15}\)

With the *Concertación*, ODEPLAN was upgraded to become the Ministry of Planning, MIDEPLAN, although the leading voice on planning continues being *Hacienda*.\(^\text{16}\)

\(^{14}\) The CIEPLAN had its antecedent in CEPLAN, the Universidad Católica’s *Centro de Estudios de Planificación*, created by economists coming from the Frei administration: Alejandro Foxley from Odeplan and Ricardo Ffrench-Davis from the Central Bank. Once the Universidad Católica was taken by the military, they moved out and created CIEPLAN. With the return to democracy, Alejandro Foxley goes to *Finance*, Jose Pablo Arellano to DIPRES and Manuel Marfan to coordinate macroeconomic policy. In the late-1990s, Marfan created the foundations for the copper funds. In 2006-2010, Arellano headed CODELCO.

\(^{15}\) Andres Velasco, son of a Radical politician exiled by the Pinochet regime, was associated to CIEPLAN while doing his doctoral studies. He was a close adviser to Finance Minister Foxley (1990-1992) and Chief Economist in the NAFTA negotiation (1995). Velasco is not shy on his sympathy for the Norway experience in the management of its resource-wealth (*El Mercurio*, December 2, 2006). See Velasco (1994) on his view of Chile’s post-war political economy of economic policy.

\(^{16}\) Nonetheless, the Ministry of Planning, MIDEPLAN, keeps the function of assessing the viability of new public investments.
4. Managing the Last Copper Cycle, 1998-2010

In the introductory section of the chapter, we stated that the “resource-curse” is a catch-all term that refers to different families of development problems where mineral abundance is associated with poor-quality economic development. One could classify in four these families of social phenomena: (i) macroeconomic instability, within it the fiscal dependence on commodity cycles; (ii) exchange rate appreciation and the disincentives for non-mineral productive bases; (iii) the long-term sustainability of growth based on non-renewable resources; and (iv) the development of corrupt and highly contentious political ecologies. In times of euphoria, policymakers seem to develop myopia and forget about potential problems, Terry Karl insightfully discussed (Karl, 1997). But as seen, the Chilean experience shows a long process of development of state reach and capacities in the name of the future of Chileans.

Success or failure, for better and for worse, the archetypical Chilean statesman calls for thinking long-term, advocating and pushing for executive authority and bureaucratic autonomies in order to manage public affairs in “technical” manner. This section answers how the Chilean state escaped the curse during the last boom-and-bust of copper prices, focusing on the macroeconomic management dimension of the management of extractives.

Chile started its twentieth-first century coming out of the mismanagement of the 1997-8 financial crisis. Hacienda carried out countercyclical expenditure, but the Central Bank played pro-cyclical with interest rates. In this context of poor economic growth and with the arrival of the first socialist president after Salvador Allende, Ricardo Lagos (2000-2006), pressures and expectations on the rising of public expenditure rose. Since the Concertacion took power in 1990, the new Santiago Consensus was that the legacies of the Pinochet’s “economic model” had to be
respected: macroeconomic stability, aggressive trade integration, and business-friendly investment climate. With the price of copper expected to come up, the late-1990s financial crisis had taken them to post-Debt Crisis levels (see Graph 3), the word heard in the polity was to expand government expenditure and address more decisively the “forgotten social agenda.” By the end of the 1990s, the contribution of copper to the state budget had fallen to 2% (see Graph 2); but copper revenue had to grow back. In short, the pro-stimulus camp argued, there was space to be less fiscally conservative, while still fiscally responsible.

Graph 3. Copper Prices

![Copper Prices, 1910-2006](graph)

Out of the policy concerns of the sustainability of government expenditure, and the defense of a competitive exchange rate for exports, the state passed the Fiscal Responsibility Law in 2006. *Hacienda* technocrats thought that the copper price would eventually return to a lower equilibrium level. The law created the so-called “copper funds,” sovereign wealth funds to be saved in the international capital markets in order to keep fiscal resources for the bad years, minimize the redistributive
battle of the good years, keep the competitiveness of non-mineral exports, and
strengthen the financial position of the country. Although a novelty on its own right,
the copper funds were also the outcome of 25 years of cumulative policy-making. The 
Fiscal Responsibility Law refined and made legally-enforceable the 2000 Structural 
Fiscal Balance Rule, which established that public finances needed to observe the 
“medium-term” price of copper. This fiscal rule, in turn, built on a decade of 
Concertacion’s prudent macroeconomic management. The latter was more continuity 
than change of the post-Debt Crisis economics of the Pinochet regime.

Indeed, the origins of the Fiscal Responsibility Law can be traced to the 
aftermath of 1982 and illustrate how policy schemes and institutions are frequently 
built out of unexpected circumstances. Contingency mattered, once again. The Copper 
Compensation Fund (CCF) was established in 1986, in the context of the Structural 
Adjustment Loan SAL-1 celebrated with the World Bank to smooth the way out of 
the financial crisis. Chile was trying to come out of a non-declared default, after the 
state assumed the insolvency of its private banking system, negotiating better 
conditions for repayment. A brain-storming process took place thinking of 
engineering better macroeconomic conditions for the future. The original idea came 
from the World Bank mission chief, a keen reader of the economic history of Latin 
America:

He liked to tell us that the worse enemy of Chile was the copper price, he had entre 
ceja y ceja 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?’

The CCF was the product of the work of economists looking at the medium-term, a 
sort of esoteric worrisome, in a context where the price of copper was on the floor, 
foreign financial resources were restrained, almost limited to the World Bank and the 
IMF: a negative macroeconomic context in which no one expected the copper price to 
increase

Juan Andres Fontaine17

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17 Interview with Juan Andres Fontaine (translation by the author). In 1982, Fontaine was Central 
Bank’s Chief of Economic Studies. In 2010 he became the first minister of economy of the first post-
Concertacion administration.
In real-world policy-making, fiscal responsibility laws can be meaningless, since there may always be an imaginative way out of it for finance ministers and politicians. Technocrats commonly maintain, then, than more important than what is promised in a law is how a Treasury behaves. Moreover, rules may be too constraining when imaginative discretion is precisely needed. Those were shared principles by the Chilean technocracy, so that the CCF operated in 1986-2006 without a law—although initially it was part of World Bank conditionality. During its first decade of existence, the CCF was not as relevant as designers may have expected. In the 1990s, fiscal surplus allowed to pay foreign debt almost without touching the fund. The US$ 1.8 millions accumulated pre-East Asian Crisis, nonetheless, were at hand to smooth the 1998-2003 depressed and hectic scenario, as Table 1 shows.

Table 1. The Chilean Copper Compensation Fund: 1987-2006
(Current US$ millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Deposit</th>
<th>Retirement</th>
<th>Net Flow</th>
<th>Stock</th>
<th>Price of Copper/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>26.361</td>
<td>0.000</td>
<td>26.361</td>
<td>26.361</td>
<td>81.086</td>
</tr>
<tr>
<td>1988</td>
<td>495.997</td>
<td>439.508</td>
<td>56.489</td>
<td>82.850</td>
<td>117.937</td>
</tr>
<tr>
<td>1989</td>
<td>1,202.962</td>
<td>1,260.064</td>
<td>-57.102</td>
<td>25.748</td>
<td>129.113</td>
</tr>
<tr>
<td>1990</td>
<td>785.062</td>
<td>256.180</td>
<td>528.882</td>
<td>554.630</td>
<td>120.879</td>
</tr>
<tr>
<td>1991</td>
<td>289.669</td>
<td>200.000</td>
<td>89.669</td>
<td>644.299</td>
<td>106.066</td>
</tr>
<tr>
<td>1992</td>
<td>134.647</td>
<td>0.000</td>
<td>134.647</td>
<td>778.946</td>
<td>103.573</td>
</tr>
<tr>
<td>1993</td>
<td>9.810</td>
<td>38.991</td>
<td>-29.181</td>
<td>749.765</td>
<td>86.713</td>
</tr>
<tr>
<td>1994</td>
<td>53.156</td>
<td>101.440</td>
<td>-48.284</td>
<td>701.481</td>
<td>104.903</td>
</tr>
<tr>
<td>1995</td>
<td>664.256</td>
<td>0.000</td>
<td>664.256</td>
<td>1,365.737</td>
<td>133.198</td>
</tr>
<tr>
<td>1996</td>
<td>324.421</td>
<td>7.323</td>
<td>317.098</td>
<td>1,682.835</td>
<td>103.894</td>
</tr>
<tr>
<td>1997</td>
<td>117.640</td>
<td>0.000</td>
<td>117.640</td>
<td>1,800.475</td>
<td>103.224</td>
</tr>
<tr>
<td>1998</td>
<td>3.764</td>
<td>273.486</td>
<td>-269.722</td>
<td>1,530.753</td>
<td>74.974</td>
</tr>
<tr>
<td>1999</td>
<td>63.438</td>
<td>516.019</td>
<td>-452.581</td>
<td>1,078.172</td>
<td>71.380</td>
</tr>
<tr>
<td>2000</td>
<td>0.000</td>
<td>404.766</td>
<td>-404.766</td>
<td>673.406</td>
<td>82.294</td>
</tr>
<tr>
<td>2001</td>
<td>250.000</td>
<td>302.255</td>
<td>-52.255</td>
<td>621.151</td>
<td>71.566</td>
</tr>
<tr>
<td>2002</td>
<td>203.944</td>
<td>548.043</td>
<td>-344.099</td>
<td>277.052</td>
<td>70.647</td>
</tr>
<tr>
<td>2003</td>
<td>0.000</td>
<td>202.450</td>
<td>-202.450</td>
<td>74.602</td>
<td>80.734</td>
</tr>
<tr>
<td>2004</td>
<td>864.322</td>
<td>731.101</td>
<td>133.221</td>
<td>207.823</td>
<td>130.106</td>
</tr>
<tr>
<td>2005</td>
<td>759.110</td>
<td>0.000</td>
<td>759.110</td>
<td>966.933</td>
<td>167.087</td>
</tr>
<tr>
<td>2006</td>
<td>3,909.724</td>
<td>2,312.919</td>
<td>1,596.805</td>
<td>2,563.738</td>
<td>305.395</td>
</tr>
</tbody>
</table>
With the Lagos administration, the new DIPRES technocracy at Hacienda wanted to become even more cautious by setting the Structural Fiscal Balance Rule. State economists believed that there was a need for reforming the accounting system of the public sector finance and defining better indicators to guide macroeconomic policy for long term policy management. Building on IMF methodologies, an ad-hoc team proposed to use the Public Sector Structural Balance indicator, aiming 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, policymakers and the general public would be able to differentiate between different sources of impacts to the national economy: the ones brought by international markets and the ones driven by domestic fiscal policy (Marcel et. al., 2001). In short, the fiscal rule limited the discretion for expansionary fiscal policy to what the “structural balance” of 1% of “potential-GDP” determined. The key parameters, “potential GDP” and “medium-term copper price,” were to be estimated by committees of experts, another important policy innovation. The committees of experts were composed by professionals of renowned academic credentials: science and reason instead of partisanship. As in the case of the 1986 CCF, the self-imposed countercyclical-policy scheme was not supported by law, but by pure political commitment. Thus, the 2006 Fiscal Responsibility Law “formalized” the quasi-formal rule of holding a 1% structural surplus. On top, it created a Pensions Reserve Fund and an Economic and Social Stabilization Fund. In 2007, the equivalent to all the copper fiscal revenue was saved (see Table 2 below). At the end of 2009, Chile’s
sovereign funds amounted US$3,421 million and US$11,285, respectively.  

The wage of Chile had become the savings too. Embedded by a legacy of technocratic culture and looking at contingent challenges and opportunities, policy-entrepreneurs set up new “rules of the game”.

Thanks to the fiscal rule (2000) and the sovereign funds (2006), there was no “resource-curse” for Chile in the macroeconomic management front. Yet, the redistributive battle developed a number of overtones. Some Concertacion leaders, in particular, questioned the maintenance of the inherited laissez-faire tax system for new private mining. Royalties, defined as a payment for the right of extracting a non-renewable resource, did not exist in the tax structure for the industry. A case that caused major outrage had been that of Disputada de las Condes, a mining concession given to Exxon in 1978 that according to its critics “for 26 years exploited a deposit without paying a peso in taxes.”

The administrations of Aylwin (1990-1994) and Frei (1994-2000) opted for hands-off on an issue politically difficult for a coalition aiming to proof its commitment with the “investment climate,” in times of a new inflow of foreign capital. Chief economic authorities thought it unwise “to send wrong signals to markets”, since the stability of taxes had been guaranteed by contracts-law (contratos de inversion extranjera) and therefore could not be unilaterally modified.

The 1974’s Legislative Decree 600, the new deal for foreign investment and a cornerstone of the new political economy, could not be touched.

Despite the decision of the second and third Concertacion’s administrations, beginning the current decade the torch of the royalty was carried by Concertacion congressmen questioning the “tax-free” system. Illustrating a way of how institutions

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18 See Sovereign Funds Annual Reports, available at [http://www.minhda.cl/](http://www.minhda.cl/). The 2009 Report takes pride of Chile having announced the world’s second largest extraordinary fiscal stimulus to counteract the global financial crisis (US$ 4,000 millions, about 2.8% of GDP).

19 See Lavandero (2003).
matter, Pinochet’s 1980 Constitution had made Congress unable to propose legislation on taxes. The royalty debate was very present in the 2000 presidential campaign bringing Ricardo Lagos to office. Lagos’ Finance Minister Nicolas Eyzaguirre used all his political power and skills, backed by the well-built legitimacy of Hacienda, to negotiate a way out with the big corporations. He succeeded: most of the mining corporations resigned to their contracts-laws—a Pinochet era legacy to attract investments after the nationalization wave—in exchange of the new royalty. Critics found the passed royalty insignificant.  

Indeed, the contribution of mining to fiscal coffers had come largely from state-owned CODELCO, although it generated only about half and a third of copper production in the 1990s and the 2000s, respectively. For 1991-2004, COCHILCO estimates that the ten largest private corporations contributed about US$ 3,100 million, 25% of what CODELCO gave to the state in the same period. With the subsequent price surge, the end of tax-breaks, and the new royalty, the contribution of private mining increased significantly, approaching CODELCO’s. In 2006-2008, private mining paid taxes and contributions in the order of US$ 6,000 million per year—some US$600 per year from the new royalty—while CODELCO paid about US$ 7,700 million annually, before the copper price fell down (see Table 2 bellow).

In the campaign for the royalty, Hacienda was a proactive player with both political weight and technocratic capacities for manoeuvring and transforming challenge into opportunity. Hacienda technocrats demanded royalties would need to go all for financing technological innovation. If this was royalty on a non-renewable

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20 Interviews with Joaquin Vial and Juan Villarzu.
21 Interview with Juan Villarzu.
22 See COCHILCO (2005: 12) and CODELCO Yearbooks.
23 See CODELCO and Consejo Minero de Chile Yearbooks. Unlike CODELCO, private companies do not provide full information on taxes and fiscal contribution.
resource (5% on profits for sales over 50,000 TM; lower rates otherwise), economic principles taught it had to be invested for the long term, not consumed in the short term. In 2005, the government established a National Council for Innovation (*Consejo Nacional de Innovacion para la Competitividad*), a new council of experts, to rethink state expenditure on research and development. Much of the execution of the royalty’s money is either advised or carried out by the reengineered development corporation CORFO, which also is in charge of new schemes to foster small and medium enterprises. *Hacienda* technocrats claimed they cared for the sustainability of economic growth rather than the short-term benefits of rising government expenditure. In the new political scenario brought by congressmen opposing the low-taxation rules of the game, state officials had the legitimacy to lead the public debate and the capabilities to design new policy scenarios. The state apparatus and the political system provided institutional resources to rethink and to execute. The attempt to allocate all the royalty in R&D expenditure, however, did not have a go. It could be argued then that thanks to the innovation fund there are less probabilities of a resource curse in the future for Chile: the exhaustible natural capital will be progressively replaced by new means of production. Still, even after setting up the royalty, the overall public expenditure on research and development represented only 0.3% of GDP, as low as in most of Latin America. The annual contribution to the innovation fund is miniscule with respect to what the “Armed Forces fund” gets: US$ 1,300 a year in the booming 2006-2008.

Besides economic challenges, resource-based development is commonly associated with conflict and violence. Indeed, recent copper-led economic expansions have meant the eruption of conflict. Yet, in contemporary Chile, mining conflict

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24 See Law 20026.
fundamentally means workers of state-owned CODELCO rioting. Pinochet’s laissez-faire meant for the labour market the reduction of benefits for workers and the expansion of tertiarization. With the return to democracy, workers were again able to take the streets and so they did. The policy assumed since the mid-1990s was to rationally incorporate the sub-contracted as full-legal workers. Next, it was the expansion of benefits for subcontracted workers, who also were able to unionize with the new labour legislation. With the surge of copper prices, workers organized the first strikes in more than two decades demanding a rise in salaries. So long, the response to demand for salary increases has been a pragmatic and piecemeal approach, avoiding general wage increases and opting for special bonuses.

Within a strong-state context, contentious collective action has small opportunities to emerge: on one hand there are institutionalized channels to deal with conflict, such as the Judiciary, the Congress, and the various local-level Executive branches, the ones of the Ministry of Interior among them; on the other, governments have a strong repressive apparatus at hand. For the case of mining in Chile, ecological conditions matter too: mining takes place mostly in the northern desert. There is conflict regarding the use of scarce water in the dry Atacama and the use of water and the management of waste in the semidry Norte Chico, where mining neighbours agriculture, and in other densely populated sites. Yet, unlike nineteenth century mining, none of these have meant large-scale conflict with local agriculture, as in Peru or Bolivia. A different story would be told were geological resources located in the more indigenous and densely-populated south.\(^\text{27}\) In addition to the relatively-

\(^{26}\) See CNIC (2010).
\(^{27}\) Resource conflict in Chile has long data but it relates to land conflict in the sub-polar forest region. Strong state meant that there was no recognition of an “indigenous question” until the late-twentieth century; the ILO-Convention 169 had to wait until the end of the Concertacion cycle: Chile was among the last Latin American countries to ratify it in 2008. Contemporary “Mapuche conflict” related to the hydro and forestry industries.
favourable ecological conditions of mining, since 1990 with the Concertacion, Chile went into a major reform of its environmental governance institutions, establishing national environmental regulator CONAMA and region-level COREMAs, authorities of constrained-still-significant degrees of autonomy. The emergence of CONAMA has not meant the disappearance of environmental conflict, but it meant an improvement of the institutional context for its management.\textsuperscript{28} The discontent with the post-Pinochet environmental governance led to the establishment of the Ministry of the Environment in 2010.\textsuperscript{29}

5. Concluding Remarks

Why has Chile escaped the resource-curse throughout its modern history? Central in the account of the success story, to be read with qualifications since it refers to the macroeconomic management aspect of the curse, is the layering of enlightened bureaucratic autonomies within a broadly-shared nation-state project. Contemporary “good governance” is carried out by different state institutions—Hacienda, CODELCO, CORFO, and Interior—embodifying different stages of strong state evolution.

In the nineteenth century, the Chilean state was the historical construction of the highly cohesive economic elite with interests in agriculture, mining, and trade, in search for control over natural resources and geopolitical predominance. A first layering of modern state development, the Age of Interior, built with the Conservative Settlement, decades before the nitrates mining cycle (1870s-1930s) took place. The post-Great Depression developmental state, led by the national development corporation CORFO, built on the legitimacy of a strong Executive and the legacies of

\textsuperscript{28} See Rojas \textit{et. al.} (2003).
\textsuperscript{29} For critical views from environmentalist perspectives, see Quiroga (1994) and Claude (1997).
early policy efforts to engineer national economic progress. CORFO gave a sustained push to a second layering of state autonomies promoting diversification in parallel to the expansion of the new copper cycle (1930s-today). The increasing overarching policy-power of Hacienda, the Ministry of Finance, characterized the third layering and reengineering of state institutions, developed by the Pinochet regime (1973-1990) and fundamentally sustained in the Concertacion years (1990-2010). The 1982 financial crisis brought the return to exports-friendly exchange rate management and a broad consensus for conservative-yet-pragmatic macroeconomic policy. Seeking to draw from the “lessons of history” on inflation and instability generated by mineral-dependence, facing the everyday contingencies of economic policy management, state actors crafted new fiscal rules heading to the 2006 copper savings funds.

How do mineral states learn? From an evolutionary perspective of social behaviour, the use of the term “resource curse” is purely metaphorical: conditions are not believed to determine outcomes. Societies can overcome their circumstances transforming challenges and weaknesses into opportunities and strengths--or may not. Hence, the understanding of cases of success or/and failure demands the understanding of the particular, i.e. agency in historical context. It was not the destiny of strong-state Chile to establish copper funds. Yet, the legacies of state evolution favoured a positive institutional context for policymakers down the road. I have shown how in Chile path-dependency was reinvented by help of shocks and contingent processes in conjunction with the creative-destructive agency of policy entrepreneurs. While leading technocrats saw windows of opportunity in believed-to-be critical events, the political system gave oxygen and support to their endeavours. Mineral states are more likely to learn from success and failure when the political arena favours the reproduction of long-term minded agents. Bounded and enhanced
by their institutional legacy, policy entrepreneurs can recreate the rules of the game in conditions of resource abundance.

References


