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ICMM International Council on Mining & Metals

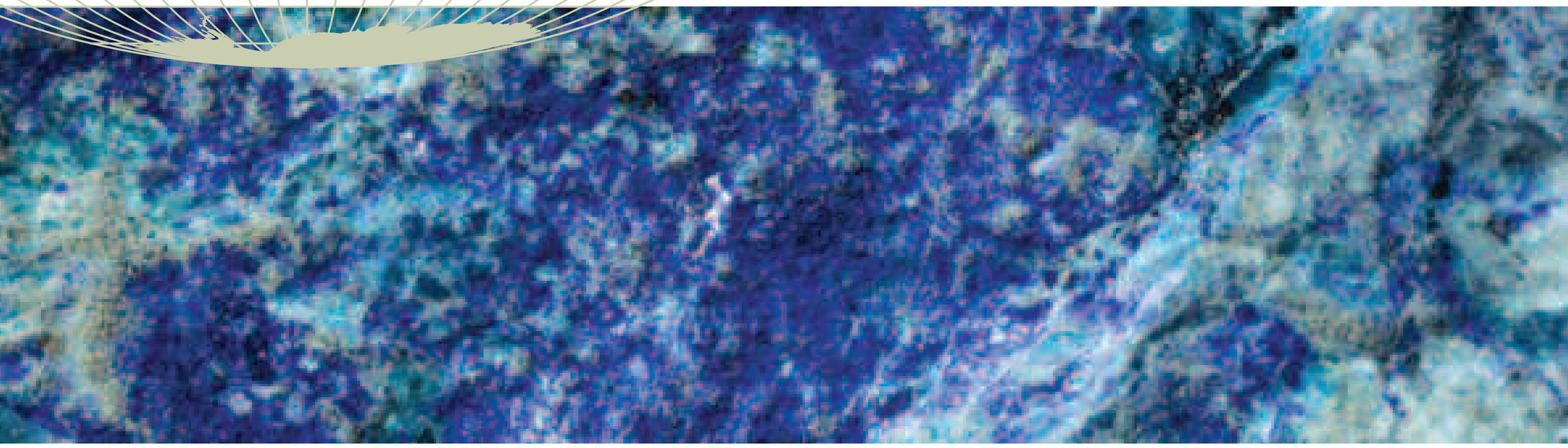
Chile

Executive summary

The Challenge of Mineral Wealth:
using resource endowments to foster sustainable development

October 2006

Spotlight series 06



Chile

Chile provides striking evidence of the contribution that mining can make to economic growth and poverty reduction. Chile's government has used taxes and royalties from the industry to effectively deliver social development (while also keeping taxes on mining competitive so as to attract investment). Mining has also led to significant job creation, both directly and indirectly. Prudent macroeconomic policies and good governance have underpinned the local and national benefits

In contrast to its modern-day successes, Chile's history provides a warning of the economic challenges sometimes associated with mineral dependence. In the early twentieth century among Chile's main exports were nitrates, dug from the Atacama Desert, and used worldwide in fertilizers and explosives. But during World War I, new synthetic industrial processes were developed to manufacture nitrates, leading to a collapse in the global market which depressed Chile's economy for more than ten years.

In recent decades, however, Chile has not only avoided such economic problems, but has used its mining industry (dominated now by copper production) to help fuel significant increases in national wealth as well as falls in poverty. Chile is now among Latin America's wealthiest countries. The region of Antogafasta (Chile's 'Region II') in which mining is the dominant industry, moreover, has more than twice the per capita GDP of the country as a whole[1], and has witnessed particularly rapid declines in poverty.

Chile is one of the four country case studies of ICMM's Challenge of Mineral Wealth initiative, which was conducted in collaboration with UNCTAD and the World Bank. This Spotlight describes the main findings of the Chile case study, outlining mining's impacts both at the national level, and around the Escondida copper mine (Chile's largest mine) in particular, and also exploring some of the factors behind Chile's success. The aim of the overall Challenge of Mineral Wealth initiative is to identify ways to improve mining's socio-economic impacts – and Chile may hold some lessons for other, so far less successful mineral-rich states in this respect[2].

It should be emphasized that all the elements of the Challenge of Mineral Wealth initiative were overseen by an independent advisory group, so as to help ensure the objectivity of the research, and stakeholders were widely consulted on its findings (please see Spotlight series 04 'Process and Feedback'). The government of Chile was also invited to review the Chile case study. "The ICMM project underlines the importance of the positive experience of our country's mining resources", commented Cochilco, the Chilean Copper Commission, in its response.

[1] Based on 2003 figures.
[2] The full case study (as well as the other three country case studies) will be published by UNCTAD following Government review.

Copper-bottomed benefits

Disentangling the effects of mining from other drivers of economic performance is difficult. Nonetheless mining has clearly had important impacts in Chile in recent decades. Accounting for 8% of GDP in 2003, mining also dominates the country's exports (42% of the country's exports were minerals and metals in the same year) and two state-owned companies alone accounted for nearly 6% of government revenue between 1994–2004. With an increase in foreign investment since the early 1990s, the sector has grown rapidly with major increases in copper production (during the period 1991-2003, total foreign mining investment was some US$15.5 billion).

Though production has expanded over time, the importance of mining has actually declined in a relative terms as Chile's economy overall has grown significantly too (over the period from 1990 to 2003 average annual GDP growth was 5.4%). Chile has also succeeded in broadening its exports, and has become an important exporter of such products as fruits and some manufactured goods.

In this respect, Chile has successfully avoided a problem sometimes associated with resource extraction: this is that the economy becomes narrowly focused on minerals, with other tradable activities becoming uncompetitive as mining exports cause an appreciation of the real exchange rate or bid up prices for scarce production factors (part of an overall phenomenon sometimes described as the 'resource curse'). In Chile this has largely been avoided in recent years. In previous decades it had been a problem; also the recent large increases in the price of copper and the consequent rapidly rising export income could potentially pose a renewed macro-economic challenge. Even so, with the exception of a currency appreciation and subsequent economic crisis in the early 1980s, there appear to have been no signs of a 'resource curse' since the economic reform process extending from the early 1970s and continuing to the mid 1980s. A major mining industry in Chile, in short, has co-existed with – and also appears to have helped drive – impressive economic growth (thus by 2003, for example, Chilean GDP per head was the highest in South America).

Similarly Chile's overall performance on social and governance indicators has been broadly, and in many respects strikingly, positive. Chile currently holds one of the highest rankings on the Human Development Index in Latin America and the Caribbean. Poverty has also fallen dramatically (in 1990, some 39% of the population was considered to live below the poverty line as defined by the World Bank; by 2000 the proportion had fallen to 21%). While these outcomes are impressive, some challenges still remain: for example, Chile's income distribution remains among the most unequal in Latin America.

In terms of governance, Chile's performance is also strong. The World Bank uses six composite indicators of the quality of governance. Chile performs well above Latin American averages across all of these, with a strong lead, for example, on the indicators dealing with 'rule of law', 'control of corruption' and 'regulatory quality' (please see Figure 1). Clearly aspects of governance – such as what would now fall under the 'voice and accountability' indicator – were seriously flawed during the period of military government of General Pinochet from 1973 to 1990. Now, however, well after the return of democracy, Chile performs relatively well in this area too. Between 1996 and 2004, the only period for which data on the World Bank indicators is available, there were some shifts in each of the measures, but trends were again broadly positive. On the issue of governance, in short, as with Chile's economic performance, it would be hard to argue that mining has held back, or somehow 'cursed', the development and progress of Chile's society and institutions.

Focusing on the effects of mining in Chile's Region II, where the Escondida mine is based, provides encouraging evidence too. Driven by rapid mining expansion, Region II's economic growth has been faster than across Chile as a whole (which explains how GDP per head reached US$11,996 in 2003, double the national average). Statistics for 2000 also show Region II had the lowest poverty rate in the country, having as mentioned experienced particularly rapid declines in poverty. Literacy and education levels in the region are also the highest in the nation.

The Escondida mine itself is located in the Atacama desert, 170 km to the southeast of Antofagasta, the nearest major town. But the mine's remoteness belies its economic significance. Total investment in the mine, which began construction in the 1980s, had reached some $4.2 billion by 2004. The mine is jointly owned by BHP Billiton (the majority shareholder and operator), Rio Tinto, a Mitsubishi Corporation-led consortium, and the International Finance Corporation. BHP Billiton, Rio Tinto and Mitsubishi Materials Corporation are all ICMM members.

In addition to directly employing 2,810 people in 2004, induced employment from the mine in the same year is estimated in the case study to be over 9,000. Escondida accounted for 1.7% of Chilean GDP in 2003 and over 3.5% in 2004. Significant economic benefits are also clearly retained nationally and locally. 99% of direct employees are Chilean nationals, for example, while 80% of the mine's procurement requirements are met from within Chile, and almost half from Region II (albeit a portion of the domestic procurement is likely to consist of imported goods bought from local agents). Escondida also has a policy of investing 1% of pre-interest and pre-tax profits annually in support of local community initiatives.

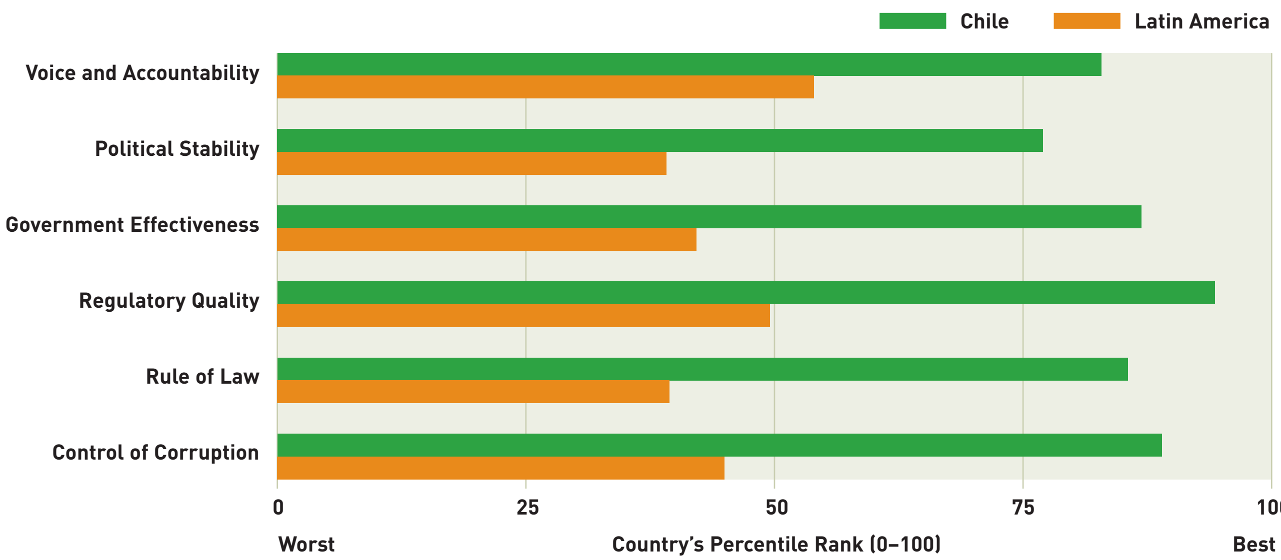
Causes of success

What then are the explanations for these broadly positive outcomes from mining in Chile? And can these be replicated by other mineral-rich countries? While the case study did not provide definite answers to these questions, various points are worth noting here (please also see Spotlight series 03 'Ways Forward').

The fundamental, albeit broad, explanation highlighted by the case study is the commitment of successive Chilean governments to economic, policy and institutional reform. Without doubt, Chile's favorable geology, its infrastructure (such as port capacity), and tax regime, have all helped attract mining investment. At the same time, mining's overall economic potential has only been realized through a set of broader policies, institutions and governance processes.

In terms of macro-economic policies, for example, in recent decades governments have generally placed strong emphasis on fiscal prudence, and also used sound monetary policy to control inflation and to avoid real exchange rate appreciation. Over time, Chile's integration in the global economy has been accelerated with encouragement of exports and trade liberalization, while state intervention in the economy was reduced as part of the neo-liberal reforms beginning in the 1970s. Taken together these policies helped Chile avoid potential macroeconomic 'resource curse' effects from mining, while creating a strong enabling environment for the

Figure 1: Six Governance Indicators for Chile compared to Latin America averages, 2004



Source: D. Kaufmann, A. Kraay and M. Mastruzzi 2005: Governance Matters IV: Governance Indicators for 1996–2004

This document is one of a series of publications produced by ICMM under its Resource Endowment initiative, which aims to better understand how large scale mining activity in low and middle income countries impacts the socio-economic development of host countries. This action-research project is being done together with UNCTAD and the World Bank Group, with broad stakeholder engagement. For the latest information on the initiative, including details of publications, activities and partners visit www.icmm.com

The International Council on Mining and Metals (ICMM) is a CEO-led organization comprising many of the world's leading mining and metals companies as well as regional, national and commodity associations, all of which are committed to improving their sustainable development performance and to the responsible production of the mineral and metal resources society needs.

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growth of the private sector, leading to significant job creation.

In addition, mineral tax revenues – mainly from state owned companies, but increasingly from privately owned firms – were over time effectively channeled into social development. Escondida is the largest private tax payer in Chile: paying US$1.1 billion for the period January-June 2006. This phenomenon is currently a challenge to the Government in terms of managing these additional –transitory in nature– funds on one hand and the expectations of the people on the other. A range of macroeconomic tools are being put in place for addressing the first challenge. A Copper Stabilization Fund has played a crucial role in this respect in smoothing fluctuations in government expenditure, thus helping both to maintain macroeconomic stability and to provide the steady levels of funding necessary for sustainable social programs (The Fund is replenished by saving all copper revenues from the state-owned mining company Codelco above a long-term reference price for copper). Together, these macro level policies and processes helped drive down poverty nationwide.

On a local level, the impressive development trends noted in Region II have been driven by economic growth processes, in which the mining sector – supported by government policies – has stimulated a range of other economic activities. Redistribution of mining tax revenues has played less of an important role here (state revenues from mineral production are not earmarked for redistribution to mining regions, unlike in some other mining countries). On the other hand, Chile has developed stronger linkages between the mining industry and other sectors of the local economy than have many other mining countries. Suppliers to the industry have flourished, partly as a result of deliberate fostering on the part of the mining firms, particularly Escondida. Also, mining companies and the government have in recent years jointly supported the establishment of a 'mining cluster', a key part of which has been to provide finance for suppliers seeking to obtain ISO 9000 and 14000 certification.

In general, successive Chilean governments have pursued all these positive macro- and micro-level policies with some persistence. The democratic governments which followed the end of military rule in 1989, for example, broadly maintained the market friendly economic reforms of the previous regime and also reversed its neglect of basic freedoms and human rights. Without doubt, various economic policy errors were made by Chilean governments since the 1970s – though lessons were learned and mistakes not repeated.

It is now important of course that the economic reform process be kept on track. The Chilean copper industry, for example, needs to remain internationally competitive (one current issue here is escalating wage demands: Escondida, for example, faced a tough collective labor negotiation including a 25 days strike in August). In terms of taxes and royalties levied on mining, it should be remembered that positive economic outcomes have been achieved so far in Chile under a fiscal regime relatively favorable to mining firms (although modified in 2005 with the introduction of a royalty regime): what matters most in this respect appears to be less the level of taxes, and more how they are used by the government.

But if the fundamental factor behind the success of mining in Chile so far has been the policies and reforms pursued by its successive governments, what is the underlying explanation for such long-lasting commitment to reform on their part? Clearly the overall quality of Chile's governance (as noted previously) is an important driver. So too, is the high quality of the civil service and the leadership (for example, in terms of commitment to fiscal prudence) shown by individual politicians. Of course, the precise reasons why Chile made sound policy choices will depend on the particular issue and time period in question. It may be, however, that one other underling factor is Chile's consensual style of policy development, underpinned by the country relative social cohesion.

Certainly Chile's institutions enjoy sufficient public legitimacy to effectively manage potential issues arising from mining which in other less well-governed countries have led to deeper societal tensions. The case study notes in general the atmosphere of cooperation and compromise in Chile both across the political spectrum and between different actors in society. This is most important and visible between government and industry, but also exists with other parts of civil society, including universities and associations in crucial supporting roles.

The United Nations University 'World Governance Survey' also suggests that Chile has established a specific pattern of policy consultations and that this type of collaboration between public institutions and the private sector has been an important factor contributing to the country's economic success. At a national level, Chile has certainly enjoyed an unusual degree of policy stability and political consensus by Latin American standards. This is partly a function of the constitution and electoral system which encourages coalitions and consensus-based policies. Since the end of military rule, for example, Chile has been governed by four successive governments of the centre-left Concertación coalition. At a local level, meanwhile, the joint work between the government and companies in support of Region II's 'mining cluster' – or put another way, in maximizing the positive economic linkages from mining – is a further illustration of such a collaborative approach.

While such factors may not be easy to replicate in other mining countries, the importance of collaboration is certainly a theme of the recommendations from the overall Challenge of Mineral Wealth initiative (again please see Spotlight series 03). At a minimum, Chile indicates to other countries that partnerships between governments, companies and other actors may be needed to unlock mining's full benefits.

ICMM would like to thank all the individuals, governments and organizations that contributed to the study, full details of which are included in the main report. In particular, ICMM appreciates the cooperation and support of: the Government of Chile, including authorities in Santiago and Antofogasta as well as representatives of local government in Antofogasta; Escondida management in Santiago and Antofogasta (Mauro Valdes and Jorge Zeballos); BHP Billiton (Holly Lindsay); management of the Escondida foundation; representatives of the Escondida labor unions; local NGOs and community groups; national universities in Santiago and Antofogasta, business associations and representatives of the small scale miners association.