

The “Pay Your Taxes” Debate

Perspectives on Corporate Taxation and Social Responsibility in the Chilean Mining Industry

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REJOINDER: IS FURTHER DEBATE NECESSARY?

Gustavo Lagos and Marcos Lima

Acronyms

AIDS	acquired immunodeficiency syndrome
ARCIS	Universidad de Artes y Ciencias Sociales
BHP	Broken Hill Proprietary Company Limited (established in 1885; name officially changed to BHP Limited in 2000)
CENDA	Centro de Estudios Nacionales de Desarrollo Alternativo
CEO	chief executive officer
CIF	cost, insurance, freight
CIPMA	Centro de Investigación y Planificación del Medio Ambiente
COCHILCO	Comisión Chilena del Cobre
CODELCO	Corporación Nacional del Cobre de Chile
COMEX	Commodity Exchange Inc.
CSR	corporate social responsibility
DFL	Decreto con Fuerza de Ley
ECLAC	Economic Commission for Latin America and the Caribbean
ENAMI	Empresa Nacional de Minería
FOB	free on board
FTA	Free Trade Agreement
GDP	gross domestic product
HIV	human immunodeficiency virus
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
IRS	Internal Revenue Service
ISO	International Organization for Standardization
JECO	Japan Escondida Corporation
KfW	Kreditanstalt für Wiederaufbau
LME	London Metal Exchange
MMSD	Mining, Minerals and Sustainable Development Project
OPEC	Organization of the Petroleum Exporting Countries
SCM	Sociedad Contractual Minera
SA	Sociedad Anónima
SEC	Securities and Exchange Commission
SII	Servicio de Impuestos Internos
Plc	Public Limited Company
Pty	proprietary
PUC	Pontificia Universidad Católica de Chile
RTZ	Rio Tinto Zinc
TC/RC	treatment and refining charges
TNC	transnational corporation
UNDP	United Nations Development Programme
UNRISD	United Nations Research Institute for Social Development
US	United States
VAT	value added tax

Preface/Préface/Prefacio

Preface

Over the past two decades, an increasing number of transnational corporations (TNCs) have adopted a variety of policies and practices associated with corporate citizenship or corporate social responsibility (CSR). CSR is often defined as greater responsiveness on the part of TNCs and other companies to the social, environmental and human rights concerns of multiple stakeholders in both host and home countries, and as going beyond the minimum standards set out in law. The CSR agenda has evolved considerably in terms of both the number of companies, civil society organizations, governments and international agencies supporting it, and the range of issues addressed. An earlier focus on selected environmental issues, working conditions, community relations and philanthropy has broadened to include such aspects as labour and other human rights, the social responsibilities of suppliers, and the role of TNCs in dealing with specific societal problems such as violent conflict and HIV/AIDS. An issue that has received less attention is that of corporate taxation. This omission is curious not only because of the key role of taxation in social development, but also because of the fact that responsibilities associated with taxation have always been a central element of citizenship and should, presumably, apply as well to corporate citizenship.

The lack of attention to the question of taxation has played into the hands of critics of TNCs who dismiss CSR as window-dressing and point to the double standards that exist when companies promote CSR initiatives and simultaneously engage in legal forms of tax avoidance or illegal tax evasion to minimize their fiscal contributions, as well as other practices that can have perverse developmental impacts.

Growing awareness of these problems, and evidence that they are increasing in the context of globalization and economic liberalization, has prompted some civil society organizations, governments and intergovernmental organizations to take action to curb such practices. Internationally, we see, for example, the formation of the Tax Justice Network and the Publish What You Pay Campaign, the efforts of the Organisation for Economic Cooperation and Development to combat tax havens, and certain developing country governments imposing or proposing increased royalties on mining companies.

As part of a series of studies on the uptake and impact of CSR in developing countries, the United Nations Research Institute for Social Development (UNRISD) requested Manuel Riesco of the Centro de Estudios Nacionales de Desarrollo Alternativo (CENDA) to prepare a paper that would examine the fiscal performance of foreign mining companies in Chile, the extent and dynamics of tax avoidance, the issue of double standards, the role of government policies in shaping fiscal behaviour, and the nature of policy reforms that might enhance the developmental contribution of TNCs.

The Riesco study, presented in part I, attempts to understand why it is that a flourishing private mining sector pays so few taxes in Chile, and why the reported pre-tax profits of a large, modern, foreign-owned copper mine are on a par with those of what Riesco describes as “the ageing and ailing state-owned corporation, CODELCO”. To explain these situations, Riesco identifies an overly permissive

neoliberal policy and legal environment; intracorporate financial flows that allow mining affiliates not only to repay loans to related off-shore financial affiliates at generous rates but also to benefit fiscally by being indebted; the sale of copper and by-products at reduced prices to companies that are part of the same corporate structure; and the over-charging of shipping, and treatment and refining charges, by these or other related companies.

The preliminary findings of the Riesco study were posted on the CENDA Web site, and were presented to two commissions of the Chilean Senate dealing with the mining industry and picked up by the press, fuelling a national debate on the question of why foreign mining companies paid no royalties and so few taxes. Certain regulatory authorities and business interests criticized the study. One of the companies examined in the study, BHP Billiton, sought a third-party opinion and subsequently submitted to UNRISD a paper, by Professors Gustavo Lagos and Marcos Lima from the Engineering Faculty of the Pontificia Universidad Católica de Chile, which was highly critical of the Riesco paper. In view of the polemic, UNRISD has decided to publish both papers in the form of a debate, which also includes a reply by Riesco and a rejoinder by Lagos and Lima.

In their paper, presented in part II, Lagos and Lima argue that it is not possible to conclude that the foreign-owned company, Minera Escondida, had underreported its income. Riesco's calculations, they argue, do not take into account or give sufficient weight to various factors, including variations in the by-product content of the ores produced by CODELCO and Escondida; the volatility in world copper prices and treatment and refining charges; the fact that Escondida sells under long-term as opposed to spot contracts; and a variety of other factors that affect sales prices. They also note a range of regulatory institutions and controls that are in place to detect and prevent the types of anomalies identified by Riesco.

In their replies, presented in part III, the authors essentially stick to their guns. Riesco acknowledges the need for some fine-tuning of his calculations but confirms the role of transfer pricing in substantially lowering corporate profits and income declared in Chile. He argues that the by-product content of CODELCO ores is unlikely to be excessively greater than that of Escondida and that the nature of the long-term contract that results in lower prices is not so much an explanation as part of the problem of transfer pricing. Referring to the serious problems of under-staffing of the state oversight agency, COCHILCO, he questions this agency's regulatory capacity. He also reaffirms the perversity of a situation where a vibrant sector of the economy pays no royalties, and he praises the recent attempt by the Chilean government to introduce a law that would impose a 3 per cent royalty on mining companies.

Lagos and Lima also maintain their original position, adding that the comparability of the financial performance of the state-owned and foreign-owned mines also reflects the fact that the state-owned company has become very competitive. Furthermore, they argue, the scenario described by Riesco suggests the existence of a major international tax fraud conspiracy which is unrealistic, involving as it would not only many companies but also the International Finance Corporation, boards of directors, auditors and so forth. Moreover, they say, numerous controls exist to prevent such a situation, not least regulations on product sales and international trade, sanctions

imposed by securities exchanges, the response of shareholders and the threat of lawsuits.

Such differences in opinion clearly indicate the need for additional research. But they also suggest that the criteria that should inform the judgement as to what is acceptable fiscal behaviour are not only technical and legal, but also ethical and political. UNRISD leaves it to the reader to decide which set of arguments is more convincing.

Peter Utting
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Préface

Au cours des deux dernières décennies, de plus en plus de sociétés transnationales (STN) ont adopté des mesures et pratiques diverses, qui sont associées aux entreprises citoyennes ou à la responsabilité sociale des entreprises (RSE). La RSE est souvent définie comme une plus grande sensibilité manifestée par les STN et d'autres sociétés commerciales, dans leur pays d'origine et dans les pays où elles s'établissent, aux préoccupations de diverses parties en matière d'environnement et de droits de l'homme, sensibilité qui les conduit à aller au-delà des normes minimales prévues par la loi. La RSE a considérablement évolué, tant pour ce qui est du nombre de sociétés, d'organisations de la société civile, de gouvernements et d'institutions internationales qui y sont favorables, que de l'éventail des sujets abordés. Si elle était initialement associée à un intérêt pour certaines questions environnementales, aux conditions de travail, aux rapports avec la population locale et à la philanthropie, elle recouvre aujourd'hui un champ beaucoup plus vaste, qui englobe les droits des travailleurs et d'autres droits de l'homme, les responsabilités sociales des fournisseurs et le rôle des STN face à des problèmes de société spécifiques tels qu'un conflit violent ou le VIH/sida. L'imposition des sociétés, en revanche, a moins retenu l'attention. Cette omission est curieuse, non seulement parce que l'imposition joue un rôle clé dans le développement social, mais aussi parce que les responsabilités associées à l'imposition ont toujours tenu une place centrale dans la citoyenneté et que ce principe devrait sans doute s'appliquer aussi aux entreprises citoyennes.

Le manque d'attention porté à la question de l'imposition a fait la part belle aux détracteurs de la RSE qui n'y voient qu'une façade et dénoncent l'utilisation d'un double standard par ces sociétés commerciales qui, tout en favorisant les initiatives de responsabilisation sociale, cherchent des moyens légaux de se soustraire au fisc ou de pratiquer l'évasion fiscale pour réduire au minimum leurs contributions publiques et se livrent à d'autres pratiques qui peuvent avoir des effets pervers sur le développement.

Une conscience accrue de ces problèmes et leur aggravation dans le contexte de la mondialisation et de la libéralisation économique—comme le prouvent divers éléments—ont incité certaines organisations de la société civile, des gouvernements et des organisations intergouvernementales à agir pour faire cesser ces pratiques. Témoins, au niveau international, la formation du réseau *Tax Justice Network* (pour la justice fiscale) et la campagne *Publish What You Pay* (pour la transparence et contre la corruption), ainsi que les efforts déployés par l'Organisation de coopération et de

développement économiques (OCDE) pour lutter contre les paradis fiscaux et l'attitude de certains gouvernements de pays en développement qui soumettent l'exploitation minière au paiement de redevances ou proposent de les augmenter.

Dans le cadre d'une série d'études sur l'accueil et l'influence de la RSE dans les pays en développement, l'Institut de recherche des Nations Unies pour le développement social (UNRISD) a demandé à Manuel Riesco du Centro de Estudios Nacionales de Desarrollo Alternativo (CENDA) de se livrer à une étude et d'établir un rapport sur les impôts versés par les sociétés minières étrangères au Chili, l'ampleur et la dynamique de l'évasion fiscale, la question des doubles standards, le rôle des politiques gouvernementales sur le comportement face à l'impôt, et la nature des réformes politiques qu'il faudrait pour augmenter la contribution des STN au développement.

Dans son étude, présentée dans la première partie, Manuel Riesco tente de comprendre la raison pour laquelle un secteur minier privé aussi florissant paie si peu d'impôts au Chili, et pourquoi les bénéfices avant impôt que déclare une importante et moderne mine de cuivre, exploitée par une société étrangère, équivalent à ceux de la CODELCO, que Manuel Riesco décrit comme une "entreprise publique malade et vieillissante". Manuel Riesco explique cette situation par une politique néolibérale et un environnement juridique permissifs à l'excès; par des mouvements de capitaux à l'intérieur de la société qui permettent aux filiales minières non seulement de rembourser leurs emprunts à des filiales financières *off-shore* à des taux généreux mais aussi de retirer des avantages fiscaux de leur endettement; par la vente de cuivre et de sous-produits à prix réduits aux sociétés du groupe; et par une surfacturation des frais de transport, de traitement et de raffinage par ces sociétés, ou par d'autres qui leur sont apparentées.

Les conclusions préliminaires de l'étude de Manuel Riesco ont été affichées sur le site Web du CENDA, présentées au Chili à deux commissions sénatoriales compétentes pour le secteur minier, puis reprises par la presse, ce qui a déclenché un débat national sur les raisons pour lesquelles les sociétés minières étrangères ne payaient pas de redevances et si peu d'impôts. Certaines autorités de contrôle et des intérêts commerciaux ont critiqué l'étude. L'une des sociétés considérées dans l'étude, BHP Billiton, a demandé l'avis d'un tiers et a présenté par la suite à l'UNRISD un document établi par les professeurs Gustavo Lagos et Marcos Lima de l'Ecole d'ingénieurs de la Pontificia Universidad Católica de Chile, qui était très critique à l'égard de l'étude de Manuel Riesco. La polémique battant son plein, l'UNRISD a décidé de donner tous les éléments du débat en publiant les deux documents, une réponse de Manuel Riesco et la réplique des professeurs Lagos et Lima.

Dans leur document, présenté dans la deuxième partie, les professeurs Lagos et Lima font valoir qu'il n'est pas possible de conclure que la société Minera Escondida, détenue par des intérêts étrangers, a déclaré des revenus inférieurs à ses revenus réels. Les calculs de Manuel Riesco, affirment-ils, ne tiennent pas compte de divers facteurs ou ne leur accordent pas suffisamment de poids. Ces facteurs sont notamment les variations de la teneur des minerais produits par la CODELCO et la Escondida en sous-produits, la volatilité des cours mondiaux du cuivre et des frais de traitement et de raffinage, le fait que la Escondida vend en exécution de contrats à long terme et non sur le marché au comptant, et divers autres facteurs qui affectent les prix de vente.

Ils relèvent aussi l'existence de divers organes et mécanismes de contrôle qui sont là pour débusquer et prévenir le genre d'anomalies que dénonce Manuel Riesco.

Dans leurs réponses, consignées dans la troisième partie, les auteurs s'en tiennent à leur raisonnement. Manuel Riesco reconnaît la nécessité d'affiner ses calculs mais maintient que le prix de cession interne contribue à réduire sensiblement les bénéfices des sociétés et les revenus qu'elles déclarent au Chili. Il fait valoir qu'il est peu probable que la teneur des minerais de la CODELCO en sous-produits soit beaucoup plus forte que celle des minerais de la Escondida et que la nature du contrat à long terme qui fait baisser les prix est moins une explication qu'un élément du problème posé par le prix de cession interne. Il met en question la capacité de contrôle de la COCHILCO, l'organe de surveillance de l'Etat, qui souffrirait d'une grave pénurie de personnel. Il souligne encore une fois la perversité d'une situation dans laquelle un secteur dynamique de l'économie ne paie pas de redevances, et loue la tentative récente du gouvernement chilien pour faire passer une loi qui obligerait les sociétés minières à payer une redevance de 3 %.

Les professeurs Lagos et Lima restent eux aussi campés sur leurs positions, ajoutant que si les résultats financiers d'une mine publique et d'une autre aux mains d'une société étrangère sont comparables, c'est que la première est devenue très compétitive. Ils estiment que le scénario décrit par Manuel Riesco suggère l'existence d'une conspiration internationale de grande ampleur pour frauder le fisc, ce qui n'est pas réaliste, car non seulement elle impliquerait de nombreuses sociétés, mais aussi la Société financière internationale, les conseils d'administration, les vérificateurs de compte etc. Ils ajoutent qu'il existe en outre de nombreux contrôles pour prévenir une telle situation, en particulier des règles régissant la vente des produits et le commerce international, des sanctions imposées par les organes chargés de surveiller la négociation des titres, la réaction des actionnaires et la menace de procès.

Les recherches doivent se poursuivre: ces différences d'opinion l'indiquent clairement. Mais elles donnent aussi à penser que les critères qui devraient permettre d'apprécier ce qu'est un comportement acceptable au niveau fiscal ne sont pas seulement techniques et juridiques, mais aussi éthiques et politiques. L'UNRISD laisse au lecteur le soin de décider quelle série d'arguments est la plus convaincante.

Peter Utting
Directeur adjoint
et coordonnateur des recherches sur la RSE, UNRISD

Prefacio

En los dos últimos decenios, un número cada vez mayor de empresas multinacionales (EM) han adoptado una diversidad de políticas y prácticas relacionadas con la ciudadanía empresarial o la responsabilidad social de las empresas (RSE). Por lo general, la RSE se entiende como una mayor respuesta de las EM y otras compañías a los intereses e inquietudes sociales, ambientales y de derechos humanos de numerosas partes interesadas tanto de los países receptores como de los países de las mismas empresas, respuesta que trasciende las normas mínimas estipuladas en las leyes. La agenda de RSE ha evolucionado considerablemente en cuanto al número de compañías, organizaciones de la sociedad civil, gobiernos y organismos

internacionales que la apoyan, así como en relación con la gama de temas que abarca. El énfasis inicial en determinados problemas ambientales, condiciones laborales, relaciones con la comunidad y filantropía, se ha ampliado para incluir aspectos como los derechos laborales y los derechos humanos, las responsabilidades sociales de los proveedores y el papel de las EM en la resolución de problemas societales específicos como los conflictos violentos y la infección por el VIH/SIDA. Un tema que ha recibido menor atención es el de la tributación de las empresas. Esta omisión llama la atención no sólo debido al papel decisivo que los impuestos cumplen en el desarrollo social, sino además porque las responsabilidades asociadas a la tributación han sido siempre un elemento central de la ciudadanía, por lo que debería aplicarse también a la ciudadanía empresarial.

La falta de atención a la cuestión tributaria ha alimentado los argumentos de los detractores de las EM que califican la RSE de una mera mascarada y hablan del doble rasero que se utiliza cuando las empresas promueven iniciativas de RSE y, al mismo tiempo, recurren a maniobras legales de elusión de impuestos y subterfugios ilegales para la evasión fiscal a fin de reducir al mínimo sus contribuciones fiscales, así como otras prácticas que pueden tener graves repercusiones sobre el desarrollo.

Una mayor sensibilidad ante estos problemas y los datos que comprueban que éstos están aumentando en el contexto de la mundialización y la liberalización económica han llevado a las organizaciones de la sociedad civil, gobiernos y organizaciones intergubernamentales a tomar medidas para poner freno a tales prácticas. En el ámbito internacional, por ejemplo, hemos observado la formación de la Red de Justicia Fiscal y la campaña “Publique lo que paga”, los esfuerzos de la Organización para la Cooperación y el Desarrollo Económicos por combatir los paraísos fiscales, así como los pasos que han tomado los gobiernos de ciertos países en desarrollo para imponer o proponer el aumento de las regalías a las compañías mineras.

Como parte de una serie de estudios sobre la penetración y el impacto de la RSE en los países en desarrollo, el Instituto de Investigación de las Naciones Unidas para el Desarrollo Social (UNRISD) solicitó a Manuel Riesco, del Centro de Estudios Nacionales de Desarrollo Alternativo (CENDA), que elaborase un documento en el cual se analizara el desempeño fiscal de las compañías mineras extranjeras en Chile, el grado y la dinámica de la evasión fiscal, el tema del doble rasero, el papel que cumplen las políticas del gobierno en la modificación de la conducta fiscal y la naturaleza de las reformas de política que podrían mejorar los aportes de las EM al desarrollo.

El estudio de Riesco, que se presenta en la parte I, se propone comprender por qué un sector minero privado floreciente paga tan pocos impuestos en Chile, y por qué las ganancias brutas de una mina de cobre grande y moderna, propiedad de intereses extranjeros, se encuentra al mismo nivel que lo que Riesco da en llamar “la empresa estatal envejecida y enferma, CODELCO”. Para explicar estas situaciones, Riesco describe un entorno jurídico y de políticas neoliberales extremadamente permisivo, flujos financieros intraempresariales que permiten a las filiales mineras no sólo reembolsar los préstamos a filiales financieras relacionadas ubicadas en el exterior a unas tasas de interés sumamente generosas, sino además beneficiarse fiscalmente mediante el endeudamiento, la venta de cobre y subproductos a precios reducidos a compañías que forman parte de la misma estructura empresarial y el sobreprecio del

transporte y cobro por concepto de tratamiento y refinación por parte de éstas y otras compañías conexas.

Las conclusiones preliminares del estudio de Riesco fueron publicadas en el sitio web del CENDA y presentadas ante dos comisiones del Senado de Chile encargadas de investigar la industria minera; los medios de comunicación dieron a conocer estas conclusiones, con lo cual se avivó un debate nacional en torno a la pregunta de por qué las compañías mineras extranjeras no pagaban regalías y pagaban tan pocos impuestos. Algunas autoridades regulatorias e intereses comerciales criticaron el estudio. Una de las empresas analizadas en el estudio, BHP Billiton, solicitó la opinión de un tercero y posteriormente presentó a UNRISD un documento, elaborado por los profesores Gustavo Lagos y Marcos Lima de la Facultad de Ingeniería de la Pontificia Universidad Católica de Chile, en el cual se hacía una fuerte crítica al documento de Riesco. En vista de la polémica desatada, UNRISD ha optado por publicar ambos documentos en forma de debate, a los cuales se ha agregado una réplica de Riesco y una contrarréplica de Lagos y Lima.

En su documento, presentado en la parte II, Lagos y Lima argumentan que no es posible concluir que la compañía extranjera, Minera Escondida, haya subdeclarado ingresos. En su opinión, los cálculos de Riesco no toman en cuenta o no valoran suficientemente varios factores, entre ellos las variaciones del contenido de subproductos de los minerales producidos por CODELCO y Escondida, la volatilidad de los precios mundiales del cobre y los cargos por concepto de tratamiento y refinación, el hecho de que Escondida venda a través de contratos a largo plazo, y no por contratos de entrega inmediata, además de una serie de otros factores que afectan los precios de venta. También hacen referencia a una gama de instituciones regulatorias y controles para detectar y prevenir los tipos de anomalías que menciona Riesco.

En sus respectivas replicas, que aparecen en la parte III, los autores básicamente reiteran sus argumentos. Riesco reconoce la necesidad de hacer ciertos ajustes a sus cálculos, pero confirma la función de los precios de transferencia para reducir considerablemente las utilidades y los ingresos que la empresa declara en Chile. Sostiene el autor que es poco probable que el contenido de subproductos de los minerales de CODELCO sea excesivamente superior al contenido de los minerales de Escondida, y que la naturaleza del contrato a largo plazo que lleva a la reducción de los precios no es tanto una explicación sino parte del problema de los precios de transferencia. En cuanto a los graves problemas de carencia de personal de la Comisión Chilena de Cobre (COCHILCO), organismo de vigilancia del Estado, Riesco pone en tela de juicio la capacidad de regulación de esta comisión. También reafirma la perversidad de la situación en virtud de la cual un vibrante sector de la economía no paga regalía alguna y elogia el reciente intento del gobierno de Chile de introducir una ley que permitiría aplicar una regalía de 3 por ciento a las compañías mineras.

Lagos y Lima mantienen también su posición original, y agregan que la comparación del desempeño financiero de una mina del Estado con una mina de propiedad extranjera refleja además el hecho de que la compañía estatal se ha hecho sumamente competitiva. Más aún, sostienen los autores, la situación que describe Riesco insinúa la existencia de una gran confabulación internacional de fraude fiscal que nada tiene

de realista y que involucraría no sólo a muchas empresas, sino también a la Corporación Financiera Internacional, juntas directivas, auditores, etc. Además, dicen los autores, existen numerosos controles para prevenir una situación de esta índole, aparte de las regulaciones sobre las ventas de los productos y el comercio internacional, las sanciones que imponen las comisiones de valores, la respuesta de los accionistas y las amenazas de demandas.

Estas diferencias de opinión son una clara indicación de la necesidad de profundizar la investigación en esta área. Pero también parecen señalar que los criterios que sustentarían los razonamientos sobre lo que constituye una conducta fiscal aceptable no son sólo técnicos y jurídicos, sino también éticos y políticos. En opinión de UNRISD, corresponde al lector decidir qué argumentos resultan más convincentes.

Peter Utting
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PART I

Pay Your Taxes! Corporate Social Responsibility and the Mining Industry in Chile

Manuel Riesco

Summary/Résumé/Resumen

Summary

One of the central concerns about the dominant corporate social responsibility (CSR) agenda from a developmental perspective is that it often ignores certain corporate practices that undermine social, sustainable and economic development. These practices include subcontracting, non-payment of taxes, corporate political influence, transfer pricing and intracorporate financial flows. The last has led to the indebtedness of affiliates in developing countries engaged in production, and outflows of profits to service loans from financial affiliates in offshore havens.

In the case of the mining industry in Chile, such practices have been common. This behaviour has been stimulated by the country's neoliberal-inspired economic policies, which are fiscally permissive and do not charge royalties for the use of natural resources. These policies overstimulate investment and result in overexploitation of natural resources in the short run. As Chile is a major actor in copper mining, such policies have contributed to a long cycle of overproduction and low prices in the world copper market, with several negative implications for the domestic economy, employment in the mining sector and government revenues.

This paper identifies and examines the relevance of these practices, contradictions and double standards in relation to foreign mining companies. Companies analysed include Exxon¹, which has a poor reputation concerning CSR practices, and BHP Billiton, generally regarded as a CSR leader. Even though the behaviour of both companies in the Chilean mining industry differs dramatically in many aspects and seems to confirm their CSR reputations, the paper nevertheless finds relevant evidence that even CSR leaders may engage in some of the above-mentioned practices, when it comes to profit reporting and taxation.

Chile's already significant position in the world copper market has increased considerably during the last decade. Copper production has more than tripled since 1990, and presently the country's output represents almost 40 per cent of world copper exports. At the same time, though, private mining companies, with only two exceptions, have not paid any taxes at all. Private companies extracted and exported 20.8 million tonnes of copper between 1993 and 2002, roughly equivalent to two years'—worth of world consumption. The value of these exports amounted to more than \$34 billion², with the net income of private companies roughly half that sum. Meanwhile, they have paid just \$1.7 billion in taxes, while accumulating \$2.6 billion in tax credits, thus holding the Chilean state liable for a net \$900 million.

Compañía Minera Disputada de Las Condes, a mine owned by Exxon, ostensibly operated at a loss for 23 years. Therefore, it did not pay any taxes at all and, on the contrary, accumulated \$575 million in tax credits. Nevertheless in 2002, Exxon (by then Exxon Mobil) sold this “money-losing” operation for \$1.3 billion. Exxon had engaged in the practices mentioned above, and exported the mining operation's substantial profits, mostly disguised as interest payments to Exxon Financials, a subsidiary in Bermuda.

¹ In 1999 Exxon and Mobil merged to form the Exxon Mobil Corporation.

² All references to \$ are to United States (US) dollars.

The second largest world copper player after the Corporación Nacional del Cobre de Chile (CODELCO) is BHP Billiton, which owns Minera Escondida, the largest copper mine both in Chile and worldwide. Its CSR and fiscal performance has been quite different. Escondida is the only private mining operation in Chile that pays taxes and publishes financial statements. Additionally, it voluntarily donates 1 per cent of pre-tax income to CSR-related projects in the country. BHP Billiton, therefore, seems to honour its reputation as a CSR world leader in the mining industry. Nevertheless, this paper has found evidence that even Escondida may have engaged in pricing practices that resulted in the underreporting of profits in Chile and, therefore, lower taxes. At the very least, the paper finds, the commercial policies of Escondida, which rely heavily on selling copper concentrates to related refiners, have resulted in substantially lower net income, when compared to CODELCO over a five-year period.

The paper ends with a reflection on how corporate practices and policies might be modified to genuinely enhance their contribution to development, and what role voluntary and regulatory instruments might play in this reform. It suggests introducing royalty charges and other taxation schemes to capture ground rent, particularly in the case of copper mining but also as a general policy regarding natural resources. Additional measures are also considered, such as auctioning mining districts, and enhancing state capacity to regulate exploitation, technologies and transfer pricing; the paper notes that more economically advanced countries widely use such policies in relation to their natural resources.

The history of Chile seems to have been intertwined with the struggle to defend its natural resources. Today, this tradition shows signs of being revived, in the face of the above-mentioned practices by transnational corporations (TNCs). A strong debate is taking place in the country on these matters and the paper's findings have become part of this debate. Following the initiative of a group of members of the National Congress, the Chilean government introduced, on 5 July 2004, a bill that establishes a 3 per cent royalty on the sales of copper producers. Public opinion is heavily in favour of such action.

All TNCs operating in the Chilean copper industry, including CSR leaders, are opposing this bill through various means. These include legal, even if questionable, actions, such as international litigation against the Chilean state, supported by the Free Trade Agreement (FTA) signed by Chile, as well as threats to withdraw investment. TNCs are also actively lobbying and organizing public campaigns in defence of their points of view. Respecting Chile's sovereign right to introduce changes to its mining legislation is perhaps a good test of the extent to which TNCs are living up to their CSR obligations.

As is well known, the historical evolution of CSR and the regulations that support it formed one of the building blocks of the modern social contract in the industrialized countries. In fact, CSR reflects the capacity of the modern dominant social class to exert its hegemony by consent rather than by force. Accepting that the first responsibility of corporations is to comply with their basic obligation to pay taxes may strengthen the concept of CSR, particularly as it applies to foreign corporations operating in less developed countries. It should enhance the possibility that the

international movement promoting CSR can make a significant contribution to development and to strengthening the modern social contract in the global South.

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Résumé

Si la responsabilité sociale des entreprises (RSE), considérée sous l'angle du développement, inquiète, c'est surtout parce qu'elle ignore souvent certaines pratiques de sociétés commerciales qui nuisent au développement social et économique et au développement durable. La sous-traitance, le non-paiement d'impôts, l'influence politique que peuvent exercer les sociétés, l'établissement du prix de cession interne et les flux financiers à l'intérieur des sociétés sont au nombre de ces pratiques. Ces flux financiers se traduisent par l'endettement des filiales installées dans les pays en développement et qui ont une activité de production, et la fuite des bénéfices, sous forme de remboursement d'emprunts, à destination de filiales financières établies dans des paradis fiscaux.

Ces pratiques sont courantes dans l'industrie minière au Chili. Ce comportement a été favorisé par les politiques économiques du pays, d'inspiration néolibérales, permissives sur le plan fiscal et ne soumettant l'exploitation des ressources naturelles à aucune redevance. Ces politiques stimulent les investissements à l'excès et entraînent à court terme une surexploitation des ressources naturelles. Comme le Chili est un acteur de premier plan dans le secteur des mines de cuivre, ces politiques ont contribué à un long cycle de surproduction et de cours bas sur le marché mondial du cuivre, ce qui a des répercussions néfastes sur l'économie nationale, l'emploi dans le secteur minier et les recettes publiques.

L'étude recense ces pratiques, en examine la pertinence et les contradictions et met en évidence l'utilisation faite du double standard par ces sociétés minières étrangères. Parmi les sociétés étudiées figurent Exxon³, dont les pratiques en matière de responsabilité sociale n'ont pas très bonne réputation, et BHP Billiton, généralement considérée comme un modèle en la matière. Bien que les comportements des deux sociétés dans l'industrie minière chilienne diffèrent sensiblement à de nombreux égards et semblent confirmer leur réputation, l'étude a réuni des éléments qui tendent à prouver que même des leaders en responsabilité sociale peuvent se livrer à certaines des pratiques évoquées plus haut lorsqu'il s'agit d'impôts et de bénéfices à déclarer.

La position déjà importante du Chili sur le marché mondial du cuivre s'est considérablement renforcée au cours des dix dernières années. La production de cuivre a plus que triplé depuis 1990, et la production chilienne représente actuellement près de 40 % des exportations mondiales de cuivre. Pourtant, à deux exceptions près, les sociétés minières privées n'ont pas payé d'impôts du tout. Entre 1993 et 2002, les sociétés privées ont extrait et exporté 20,8 millions de tonnes de cuivre, soit en gros l'équivalent de la valeur de ce que le monde consomme en deux ans. La valeur de ces exportations s'élevait à plus de 34 milliards de dollars⁴, ce qui porte le revenu net des sociétés privées à environ la moitié de cette somme. Pourtant,

³ Exxon et Mobil ont fusionné en 1999 pour former la société Exxon Mobil.

⁴ Par dollar, on entend partout ici le dollar des Etats-Unis (E.-U.).

elles n'ont payé que 1,7 milliards de dollars d'impôts, tout en accumulant 2,6 milliards de dollars de crédit d'impôt, ce qui fait que l'Etat chilien a envers elles une dette nette de 900 millions de dollars.

La Compañía Minera Disputada de Las Condes, mine appartenant à Exxon, a fonctionné ostensiblement à perte pendant 23 ans. Elle n'a donc pas payé d'impôts du tout et a, au contraire, accumulé 575 millions de dollars de crédit d'impôt. Pourtant, en 2002, Exxon (devenu alors Exxon Mobil) a vendu cette mine qui "perdait de l'argent" pour 1,3 milliards de dollars. Exxon s'est adonné aux pratiques évoquées plus haut et a exporté les bénéfices confortables de la mine, déguisés pour la plus grande partie en intérêts payés à Exxon Financials, une filiale établie aux Bermudes.

Le deuxième producteur mondial de cuivre après la Corporación Nacional del Cobre de Chile (CODELCO) est BHP Billiton, qui détient Minera Escondida, la plus grande mine de cuivre du Chili et du monde. Son comportement en matière de responsabilité sociale et d'impôts a été tout différent. Escondida est la seule mine privée du Chili qui paie des impôts et publie des états financiers. De plus, elle verse spontanément 1 % de ses revenus avant impôt à des projets liés à la RSE dans le pays. BHP Billiton semble donc être à la hauteur de sa réputation de leader de l'industrie minière pour son comportement socialement responsable. Pourtant, la présente étude a réuni des éléments qui tendent à prouver que même Escondida a pu se livrer à des pratiques de fixation de prix qui l'ont amenée à sous-déclarer ses bénéfices au Chili et à réduire ainsi ses impôts. Selon les conclusions de l'étude, les politiques commerciales de Escondida, qui consistent surtout à vendre du concentré de cuivre à des usines de raffinage du groupe, ont eu pour effet de réduire sensiblement ses revenus nets, comparés à ceux de la CODELCO sur une période de cinq ans.

L'étude se termine par une réflexion sur les changements que les entreprises devraient apporter à leurs pratiques et politiques pour augmenter sérieusement leur contribution au développement et sur le rôle que les instruments volontaires et la réglementation pourraient jouer dans cette réforme. Elle propose l'introduction de redevances et d'autres régimes d'imposition pour récupérer le prix de la location du terrain, dans le cas des mines de cuivre en particulier, mais aussi dans un cadre politique plus général concernant les ressources naturelles. D'autres mesures sont également envisagées, telles que la mise aux enchères des zones minières et une capacité accrue de l'Etat à en réglementer l'exploitation, les techniques à employer et la fixation du prix de cession interne; l'étude note que, face à l'exploitation de leurs ressources naturelles, des pays économiquement plus avancés font un large usage de ces mesures.

L'histoire du Chili semble être intimement mêlée à la lutte pour la défense de ses ressources naturelles. Devant les pratiques des sociétés transnationales (STN) évoquées plus haut, cette tradition donne aujourd'hui des signes de renaissance. Ces questions donnent lieu au Chili à un âpre débat, dont font désormais partie les conclusions de l'étude. A la suite de l'initiative d'un groupe de membres du Congrès national, le gouvernement chilien a déposé, le 5 juillet 2004, un projet de loi qui oblige les producteurs de cuivre à verser une redevance de 3 % de leurs ventes et qui est largement soutenu par l'opinion publique.

Toutes les STN de l'industrie du cuivre présentes au Chili, y compris les leaders en matière de responsabilité sociale, s'opposent à ce projet de loi par divers moyens,

notamment des moyens de droit, encore que discutables, tels que des procès internationaux intentés à l'Etat chilien en s'appuyant sur l'Accord de libre-échange signé par le Chili, et en menaçant de retirer leurs investissements. Les STN font aussi un intense travail de lobbying et organisent des campagnes publiques pour défendre leurs positions. Le respect du droit souverain du Chili d'introduire des changements dans sa législation sur les mines est peut-être un bon test de la mesure dans laquelle les STN respectent leurs obligations en matière de responsabilité sociale.

L'évolution historique de la RSE et les réglementations sur lesquelles elle s'appuie étaient, on le sait, l'un des piliers du contrat social moderne dans les pays industrialisés. En fait, la RSE reflète la capacité de la classe sociale dominante à exercer son hégémonie par consentement plutôt que par la force. Le fait d'admettre que le premier devoir des sociétés commerciales est de payer des impôts, peut renforcer la notion de responsabilité sociale des entreprises, s'agissant en particulier des sociétés étrangères opérant dans des pays relativement peu développés. Le mouvement international attaché à la RSE devrait ainsi pouvoir accroître sa contribution au développement et renforcer le contrat social dans le Sud.

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Resumen

Una de las principales preocupaciones relativas a la agenda principal de la responsabilidad social de las empresas (RSE) desde el punto de vista del desarrollo es que ésta frecuentemente ignora ciertas prácticas empresariales que socavan el desarrollo social, sostenible y económico. Estas prácticas son la subcontratación, la falta de pago de impuestos, la influencia política de las compañías, los precios de transferencia y los flujos financieros intraempresariales. Este último factor ha llevado al endeudamiento de las instituciones afiliadas ubicadas en los países en desarrollo que se dedican a la producción, así como a la salida de ganancias para pagar préstamos de instituciones financieras afiliadas en paraísos fiscales extraterritoriales.

En el caso de la industria minera de Chile, estas prácticas han sido comunes. Este comportamiento se ha visto estimulado por las políticas económicas del país, de inspiración neoliberal y que son fiscalmente permisivas y no contemplan el cobro de regalías por la explotación de los recursos naturales. Tales políticas sobreestimulan la inversión y resultan en una sobreexplotación de los recursos naturales a corto plazo. Dado que Chile es un actor importante en la extracción de cobre, estas políticas han contribuido a un largo ciclo de sobreproducción y bajos precios en el mercado mundial del cobre, con varias implicaciones negativas para la economía nacional, el empleo en el sector minero y las recaudaciones del gobierno.

En este documento se identifican y analizan la importancia de estas prácticas, así como las contradicciones y los dobles raseros que existen en relación con las compañías mineras extranjeras. Las compañías objeto del análisis son Exxon⁵, que tiene una muy mala reputación en lo que se refiere a prácticas de RSE, y BHP Billiton, que se tiene en líneas generales como una empresa líder en RSE. Si bien la conducta de ambas empresas en la industria minera chilena difiere diametralmente en

⁵ En 1999, Exxon y Mobil se fusionaron para crear la Exxon Mobil Corporation.

muchos aspectos y parece confirmar sus respectivas reputaciones en el campo de la RSE, en este documento se presentan pruebas de que incluso los líderes de la RSE podrían recurrir a algunas de las prácticas mencionadas anteriormente llegada la hora de la declaración de las ganancias y la tributación.

La posición de Chile en el mercado mundial del cobre, que ya era importante, se ha elevado considerablemente en los últimos 10 años. La producción de cobre se ha triplicado desde 1990; y actualmente, la producción del país representa casi 40 por ciento de la exportación mundial de cobre. Pero al mismo tiempo, las compañías mineras privadas, con la excepción de dos empresas, no han pagado ninguna clase de impuestos. Las empresas privadas extrajeron y exportaron 20.8 millones de toneladas de cobre entre 1993 y 2002, lo que *grosso modo* equivale a dos años de consumo mundial. El valor de estas exportaciones ascendió a más de \$34 mil millones⁶, y el ingreso neto de las compañías privadas totalizó aproximadamente la mitad de ese monto. Pero han pagado apenas \$1.7 mil millones en impuestos y acumulado \$2.6 mil millones en créditos fiscales, dejando al Estado chileno con un pasivo neto de \$900 millones.

La Compañía Minera Disputada de Las Condes, propiedad de Exxon, operó ostensiblemente con pérdidas durante 23 años. Por lo tanto, no pagó impuestos; al contrario, acumuló \$575 millones en créditos fiscales. Sin embargo, en 2002, Exxon (en aquel entonces Exxon Mobil) vendió esta operación “que perdía dinero” por \$1.3 mil millones. Exxon llevó a cabo las prácticas mencionadas anteriormente y exportó las considerables ganancias de la operación minera, en su mayor parte disfrazadas de pagos de intereses a Exxon Financials, una subsidiaria establecida en las Bermudas.

El segundo gran actor mundial del cobre luego de la Corporación Nacional del Cobre de Chile (CODELCO) es BHP Billiton, empresa propietaria de Minera Escondida, la mina de cobre más grande del mundo. El desempeño fiscal y de RSE de esta empresa han sido sumamente diferentes. Escondida es la única explotación minera privada de Chile que paga impuestos y publica estados financieros. Además, dona voluntariamente el 1 por ciento de sus ingresos brutos a proyectos de RSE que se ejecutan en el país. Por lo tanto, BHP Billiton parece hacer honor a su reputación como líder mundial de RSE en la industria minera. Sin embargo, en este documento se presentan datos probatorios de que mismo Escondida pudiera haber incurrido en prácticas de fijación de precios que se tradujeron en una declaración menor de ingresos y, por lo tanto, en una reducción de los impuestos. En el documento se indica que, en el menor de los casos, las políticas comerciales de Escondida, que dependen enormemente de la venta de concentrados de cobre a refinerías relacionadas, han conducido a ingresos netos considerablemente inferiores en comparación con CODELCO durante un período de cinco años.

El documento concluye con una reflexión sobre cómo podrían modificarse las prácticas y políticas de las empresas para alcanzar un genuino mejoramiento de su contribución al desarrollo y qué papel desempeñan los instrumentos voluntarios y regulatorios en esta reforma. Se sugiere introducir el pago de regalías y otros esquemas de tributación para captar renta del terreno, sobre todo en el caso de las minas de cobre, pero también como política general aplicable a los recursos naturales.

⁶ Todas las referencias a dólares son dólares de los Estados Unidos.

También se consideran otras medidas adicionales, como la subasta de distritos mineros y el mejoramiento de la capacidad del Estado; y para regular la explotación, las tecnologías y los precios de transferencia. Se señala en este documento que los países económicamente más avanzados utilizan ampliamente este tipo de políticas en relación con sus recursos naturales.

La historia de Chile parece estar entrelazada con las luchas por la defensa de sus recursos naturales. Hoy en día, esta tradición da señales de resurgimiento, ante las prácticas ya mencionadas que llevan a cabo las empresas multinacionales. Actualmente se suscita un álgido debate en el país sobre estos aspectos, y las conclusiones que figuran en el documento forman parte del mismo. Luego de una iniciativa de un grupo de miembros del Congreso Nacional, el gobierno chileno introdujo el 5 de julio de 2004 un proyecto de ley que estipula una regalía de 3 por ciento para las ventas de los productores de cobre. La opinión pública se ha pronunciado resueltamente a favor de esta medida.

Todas las EM que operan en la industria chilena del cobre, incluidos los líderes de RSE, se oponen al proyecto de ley por distintos medios, incluso acciones legales (aunque cuestionables), como el litigio internacional incoado contra el Estado chileno, sobre la base del Tratado de Libre Comercio (TLC) que firmara Chile, así como mediante amenazas de retiro de las inversiones. Las EM también están presionando activamente ante el poder legislativo y organizando campañas públicas en defensa de sus opiniones. El respeto al derecho soberano de Chile a incorporar cambios a su legislación minera es probablemente una buena prueba del grado en que las EM están cumpliendo con sus obligaciones de RSE.

Como bien se sabe, la evolución histórica de la RSE y las regulaciones que la sustentan constituyeron uno de los cimientos del contrato social moderno en los países industrializados. De hecho, la RSE refleja la capacidad de la clase social dominante moderna de ejercer su hegemonía mediante el consentimiento en lugar de la fuerza. El aceptar que la primera responsabilidad de las empresas es cumplir con su obligación básica de pagar los impuestos puede fortalecer el concepto de la RSE, sobre todo en el caso de las compañías extranjeras que operan en países menos adelantados. Ello debería ampliar las posibilidades de que el movimiento internacional que promueve la RSE pueda hacer un aporte importante al desarrollo y el fortalecimiento del contrato social moderno en todo el Sur.

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Chilean History and the Struggle over Natural Resources

Toward the end of the nineteenth century (1879–1881), Chile went to war against its northern neighbours, Bolivia and Peru, and occupied the nitrate-rich deserts in the region. Chile won the war, moved its border 1,500 kilometres to the north, and thereby annexed all the nitrate deposits and most of the copper reserves that were to gain importance during the following century. Most of the nitrate mines, however, ended up in the hands of foreign, mainly British, capital. Maverick British miner-financier John Thomas North, the so-called Nitrate King, owned many of them at one point. A few years later, in 1891, these interests financed and prompted an armed rebellion against the Chilean government. The bloody civil war that followed ended with the defeat and suicide of President José Manuel Balmaceda (1889–1891), who had suggested nationalizing the nitrate mines (Ramirez Necochea 1968).

During the twentieth century, copper gradually displaced nitrate as the main export and, after the crisis of the 1930s, many nitrate mines closed. United States (US) companies exploited Chilean copper during most of the twentieth century, until President Eduardo Frei Montalva (1964–1970) partially nationalized the copper mines. On 11 July 1971, President Salvador Allende (1970–1973) fully nationalized all the minerals and the large foreign mining companies' assets, with the unanimous endorsement of the Chilean National Congress. The United States reacted to the nationalization of copper companies, as the British had done a century earlier when proposals had been put forward to nationalize the nitrate mines, conspiring with the Chilean military and right-wing politicians. This process culminated in the bloody coup headed by General Augusto Pinochet on 11 September 1973 (Lavandero 1999, 2001).

Nonetheless, Pinochet could not completely reverse Allende's nationalization of the copper mines and mineral resources. On the contrary, his government profited significantly from state ownership⁷, doubling the size of the Corporación Nacional del Cobre de Chile (CODELCO)—the state corporation that was formed out of the fusion of the nationalized copper companies. Even today, the Chilean military receives 10 per cent of the revenue from CODELCO's exports (Caputo 1996, 2000; Caputo et al. 2000, 2001).

At the same time, Pinochet implemented legal changes that, while formally preserving state ownership of minerals, as stated by the Chilean Constitution, allowed for de facto private possession, at practically no charge at all. Most of the Chilean minerals, with the exception of those owned by CODELCO, were subsequently acquired and developed by large private companies, virtually all of them transnational corporations. These companies went on to triple overall copper output. Ironically, this occurred not during the Pinochet government but during the ensuing period of transition to

⁷ It is not widely known that Pinochet—known for both human rights violations and his sponsorship of the “Chicago boys” neoliberal economic measures, and who violated many Chilean laws—in fact complied, almost to the letter of the law, with two important legacies of the previous Frei and Allende governments: agrarian reform and copper nationalization. It is not at all improbable that the basis of the so-called Chilean economic miracle may owe more to these and other momentous social and economic transformations implemented in the reformist and revolutionary 1960s and early 1970s than to the ensuing neoliberal economic recipes.

democracy when foreign direct investment flowed into the Chilean economy (Caputo 1996, 2000; Caputo et al. 2000, 2001).

Nevertheless, CODELCO remains the largest copper producer in the world, accounting for almost 40 per cent of Chilean production and 13 per cent of world copper production. The other world copper giants are also present in Chile (see table I.1). BHP Billiton (Australia), the second largest copper company, controls Minera Escondida, the world's largest mining operation, which accounts for 19 per cent of Chilean copper production and 8 per cent of world production. Anglo American Plc (United Kingdom) controls 18 per cent of Chilean production and 4 per cent of world production. Antofagasta Holdings, owned by the Chilean Luksic Group, has a significant presence in the country, with 10 per cent of Chilean copper production. Phelps Dodge (United States), the third largest world producer, with 8 per cent of world production, controls 9 per cent of Chilean production, although sharing with CODELCO the property of its largest Chilean mining operation, El Abra. Rio Tinto (Australia), which controls 7 per cent of world production, holds 30 per cent of Escondida. Noranda-Falconbridge (Canada) controls Collahuasi, together with Anglo American (COCHILCO 2003; AME Research 2003).

Permissive mining legislation inherited from the Pinochet era (1973–1990) has enabled most private mining companies to avoid paying any taxes.⁸ Private companies extracted and exported 20.8 million tonnes of copper between 1993 and 2002, roughly equivalent to two years' worth of world consumption. Sales amounted to more than \$34 billion⁹ (COCHILCO 2003), with net income of roughly half of that sum, as will be shown below. Meanwhile, private companies have paid just \$1.7 billion in taxes, while accumulating \$2.6 billion in tax credits, thus holding the Chilean state liable for a net \$900 million. At the same time, copper overproduction associated with the Chilean copper boom of the 1990s resulted in a severe and prolonged decline of world copper prices.¹⁰ Quite naturally, in the face of such evidence, the matter of foreign control over natural resources has surfaced again in Chile as a central issue on the country's political and economic agenda.

This brief historical introduction shows that the history of Chile is closely intertwined with the struggle for sovereignty over natural resources. Repeatedly, the country has confronted the foreign companies that exploit them. Only this time, some of the largest mining operators in Chile happen also to be world-renowned leaders in the corporate social responsibility (CSR) movement.

⁸ See Caputo 1996; Caputo et al. 2000, 2001; CENDA 2004c, 2004d; Farías 2002; Fazio 1997, 2001; Figueroa 1998; Ibáñez and Pizarro 2003; Lavandero 1999, 2001, 2003; Riesco 2000, 2001a, 2002, 2003.

⁹ All references to \$ are to United States (US) dollars.

¹⁰ Lavandero 2003; Chilean Senate 2003i; Caputo 1996, 2000; Caputo et al. 2000, 2001; COCHILCO 2003.

Table I.1: Chile: Copper mines and ownership ^{(a.) (b.)}

Company	Owners/Controllers	Copper production 2002		Change from 1993	
		Thousands of tonnes of pure copper	% of total production	Thousands of additional tonnes of pure copper	% increase since 1993
CODELCO-CHILE	Chilean state (100%)	1,520	33	380	33
El Abra	CODELCO (49%) – Phelps Dodge (51%)	225	5	225	New mine
ENAMI	Chilean state (100%)	81	2	-73	-47
Total Chilean state (totally or partially owned)		1,826	40	533	41
Minera Escondida	BHP Billiton (57.5%) – Rio Tinto (30%) – Others (12.5%)	758	17	369	95
Cerro Colorado	BHP Billiton (57.5%) – Aur Resources and others	128	3	128	New mine
Subtotal BHP Billiton		886	19	498	128
Collahuasi	Noranda (Falconbridge) (56%) – Anglo American Plc (44%)	434	9	434	New mine
Disputada de Las Condes	Anglo American Plc	250	5	68	38
Mantos Blancos	Anglo American Plc	153	3	79	105
Subtotal Anglo American Plc		837	18	580	226
Los Pelambres	Antofagasta Plc (Luksic Group, Chile)	336	7	336	New mine
El Tesoro	Antofagasta Plc (Luksic Group, Chile)	84	2	84	New mine
Michilla	Antofagasta Plc (Luksic Group, Chile)	52	1	52	New mine
Subtotal Antofagasta Holdings (Luksic)		472	10	472	New mine
Candelaria	Phelps Dodge (81%)	199	4	199	New mine
Zaldívar	Placer Dome	148	3	148	New mine
Quebrada Blanca	Aur Resources	74	2	74	New mine
Other		139	3	248	-3
Subtotal other private companies		560	12	443	290
Total private mining		2,755	60	1,993	262
Total Chilean copper production		4,581	100	2,525	123

Notes:

(a.) The first two columns of data refer to production from 2002, the last two columns refer to the increase or decrease in production since 1993. That is, the total copper production increased by 2,525 thousand tonnes from 1993 to 2002, which is 123% of the 1993 output. Of that, state-owned companies increased 533 thousand tonnes, which is equivalent to 41% of their 1993 production. Copper production by private companies, meanwhile, increased 2,218 thousand tonnes, which is equivalent to 262% of their 1993 production (percentages have been rounded). Roughly speaking, total Chilean copper production more than doubled from 1993 to 2002 (2.23 times), while private production more than tripled (3.62 times) and state production increased by less than half (1.41 times) during the same period.

(b.) Figures have been rounded to nearest whole number.

Sources: CENDA (2004b:table 1.1); AME Research (www.ame.com.au); CENDA, Cuadernos (www.cep.cl).

Could it be that CSR leaders are misbehaving in Chile by avoiding their fiscal responsibilities? Alternatively, are the CSR leaders showing their counterparts how to behave, regarding taxation issues? Or is a misconceived Chilean fiscal policy, supported and recommended by international financial institutions as an example to be followed, the main culprit in a situation that is now negatively affecting both the country and the industry? As this paper intends to show, all of the above seem to be true to some extent.

CSR and the Mining Industry

CSR is an important recent development affecting not only the mining industry, but also international corporate self-regulation and accountability more generally. The mining and minerals industry is known to face difficult challenges, and according to independent CSR studies, it is currently distrusted by many of the people it deals with day to day. It has been failing to convince some of its constituents and stakeholders that it has the “social licence to operate” in many parts of the world (IIED 2002, 2003).

Since 1999, the mining industry has undertaken global initiatives, as well as numerous individual company projects in the area of CSR. Among them, nine of the world’s largest mining companies decided to support a project to examine the role of the minerals sector in sustainable development, and how its contribution could be enhanced. The World Business Council for Sustainable Development engaged the International Institute for Environment and Development (IIED) to undertake a two-year independent process of research and consultation—the Mining, Minerals and Sustainable Development Project (MMSD). This project examined CSR issues in relation to the mining industry on four continents, and in more than 20 individual countries, and produced a comprehensive report and a series of recommendations (IIED 2002).

The study’s main conclusions, which include the following, seem significant.

- In addition to gaining hard currency from taxes and royalties, benefits from mineral development should include employment, infrastructure such as roads and hospitals, linkages upstream to industries that supply goods and services or downstream to industries that process mineral outputs, and technology transfer.
- In some countries, however, mineral activities have not brought sustained economic development. Sudden wealth may have detrimental effects on social and political life, leading to or supporting corruption, authoritarian government, human rights abuse, or armed conflict.
- The solution is to find better ways to capture and manage mineral wealth and to ensure that it is invested for lasting benefits in support of national, regional and local development (IIED 2002:xix).
- The ability to manage mineral wealth effectively has lagged behind the ability to attract mineral investment. A key challenge now for many countries is to develop policy frameworks to ensure that mineral wealth is captured and creates lasting benefits for local communities and the broader population (IIED 2002:172).

On another related matter, the report notes that, “Markets that welcome primary products must not discriminate against products that have been further processed in the exporting country” (IIED 2002:181).

When it comes to Chile, nonetheless, the report appears biased in presenting the mining industry largely as a success case—an example of good practices.

Chile, whose copper production accounts for 35% of world output, is now among the group of ‘high human development’ countries (ranked 39th by UNDP [United Nations Development Programme]). Here, too, many of the rewards have been reaped locally: the mining capital of Antofagasta is relatively prosperous and over the last 20 years unemployment has fallen despite the arrival of immigrants from other regions (IIED 2002:172–173).

The report presents optimistic graphs about the growth of Antofagasta supermarket, vehicle and other sales, which are linked to the mining boom. It applauds the Chilean copper stabilization fund,¹¹ and notes that the country is a model of foreign investment-friendly, World Bank-sponsored (sic) economic policies. It points out that Chile is one of the few countries that do not charge mining royalties (IIED 2002:180).

A MMSD seminar dedicated to Chile, which was held in Antofagasta and Santiago in 2002, also praised the mining industry, indicating that mining in Chile was key for the country’s fast growth. This was particularly apparent in Antofagasta, where poverty was reduced by 60 per cent during the 1990s, while in Chile as a whole it decreased by 47 per cent. According to reports presented in the seminar, the mining boom explains 10 per cent of the overall per capita gross domestic product (GDP) increase of Chile during the 1990s, with salaries in mining being double the national average. All presentations in the MMSD seminar refer to the mining industry in Chile in highly positive terms (CIPMA 2002a–2002d).

The copper industry in Chile seems to have played an important part in the above optimistic scenario. Large investments, most of them foreign, have flowed into the Chilean mining industry during the past decade, and copper production has more than tripled since 1990 (COCHILCO 2003). But the copper industry has not only led all other industries in the country both in size and growth rates; it has also been a leader in relation to CSR. The best example of this behaviour is BHP Billiton’s Minera Escondida, the leader in Chilean and world private copper mining, whose CSR-related projects are presented later in this paper.

Escondida’s Declaration of Principles (Minera Escondida 2003:17) is a good example of how CSR-conscious companies view themselves. Escondida aspires to be the most successful and respected mining company in the world. Its purpose is to create value for its shareholders, communities, customers and employees. Its growth requires confidence from employees, customers, suppliers, communities and shareholders. It values security and the environment, sustainable development, integrity, high performance, mutually beneficial relations, courage to lead change, and mutual respect. Success is reflected in shareholders getting superior profits from their investment, customers and suppliers benefiting from business relations with the

¹¹ Chile has a state-owned and managed “copper stabilization fund” into which it saves part of state copper revenues during high price cycles for distribution during depressive cycles.

company, adjacent communities valuing the quality of the company's presence, and each employee starting each day with a sense of purpose and finishing with a sense of achievement.

The above notwithstanding in what follows, a different story emerges about mining in Chile, and the country's "World Bank-sponsored" mining policies. If a company is going to contribute to development in a CSR context, it needs to do at least five things: (i) contribute to government revenues; (ii) generate profits that are used productively in the country; (iii) generate export revenues; (iv) generate employment; and (v) promote community development. One should, of course, also add that the company should protect the environment (Utting 2002; IIED 2002, 2003).

Quite a strong case may be made that the large private mining industry in Chile today is failing on most of these counts. The analysis presented in this paper also suggests that some of the above conditions are linked in a causal way. The country's tax legislation is both conceptually faulty and permissive and, as a result, mining companies largely avoid paying taxes. Consequently, there is a stimulus to overinvest. The resulting overproduction has depressed world market prices. As a result, as detailed later in this paper, there has been a serious fall in government revenues, export revenues and employment.

Not all mining companies operating in Chile behave in the same way. Moreover, the worst in terms of tax avoidance are certainly not the ones that appear as CSR leaders. However, even in the latter's case, this paper has found evidence that may question certain practices regarding profit reporting and taxation. At the very least, CSR leaders are not behaving proactively to help improve the more substantial, tax-related matters. In the Chilean case, it will be emphasized, this means not only complying honestly with existing tax legislation, but also adopting an attitude of collaboration regarding current government efforts to change a faulty taxing scheme, inherited from a business-friendly dictatorship. Instead, the mining industry has adamantly opposed such efforts.

How to Earn Money Operating at a Loss

Chilean authorities, including government and congress, as well as the press and public opinion, were quite shocked in 2002 when Exxon announced it had agreed to sell Compañía Minera Disputada de Las Condes, a medium-sized copper mine in the Andes. The buyer was Anglo American Plc, one of the world's largest copper producers that operates Mantos Blancos and other copper mines in the north of the country.¹² The agreed selling price for Disputada de Las Condes was \$1.3 billion.

¹² The purchase of the Mantos Blancos copper mine by Anglo American Plc back in the 1980s also generated controversy—albeit of a different kind. Until then, the mine was the property of its own executives, under an elaborate scheme designed by the original owner, the Chilean mining entrepreneur, Sali Hoschild. He had decided to implement such a scheme shortly before his death to block his family and heirs from selling the mine. The scheme consisted of transferring the property of the company to its executives, each of whom would maintain their part until retirement, when they had to transfer their share to their successor. In return, they received a generous pension. Hoschild's family and heirs, for their part, were entitled to a generous permanent payment. The scheme worked while the old cadre of executives, formed by Hoschild himself, remained in charge. In time, though, they were replaced by younger executives, who found a way around the scheme by selling the company, to the benefit of themselves and their family heirs.

Exxon had bought the mine from the Chilean state back in the mid-1970s for \$80 million. During the intervening 23 years, Exxon had operated Disputada de Las Condes ostensibly at a loss. It never paid any taxes at all.¹³ Quite the opposite, it accumulated \$575 million in (gross) tax credits, which were offset against the activities of Disputada de Las Condes and would be used up as the company became profitable.¹⁴ Exxon also announced that the transaction with Anglo American Plc was to be signed in a foreign country, apparently to avoid paying some \$300 million in capital gains tax to the Chilean state (Chilean Senate 2003j; CENDA 2004a: 13/05/2003).

A few academics, one lonely senator and the head of the state copper giant, CODELCO, had for years been denouncing the troubling situation that most foreign companies exploiting the rich Chilean copper deposits were paying neither taxes nor royalties. In addition, there were concerns that the subsequent stimulus to overinvest in Chilean copper production was generating a glut in the world copper market, which resulted in declining prices.¹⁵ Nobody seemed to listen. The Exxon deal, however, went too far. The government urgently drafted a law that forced Exxon to pay capital gains tax even if the transaction was made in a third country, and Empresa Nacional de Minería (ENAMI), the state copper company that had originally sold the mine to Exxon, reclaimed its entitlement and became the first choice to buy back Disputada de Las Condes if Exxon were to sell. Negotiations started between Exxon and the government, and finally the transaction took place in Chile, with Exxon paying a token tax of some \$27 million.

However, the matter had already attracted the attention of the press, and public opinion reacted indignantly. Many political authorities, including cabinet ministers, publicly sponsored the establishment of a mining royalty. The Chilean Senate agreed unanimously to form a special committee to investigate taxation by mining companies, headed by the senator who had been denouncing the matter for years (Chilean Senate 2003a–2003q).¹⁶ On 5 July 2004, with the support of certain

¹³ See Caputo 1996; Caputo et al. 2000, 2001; CENDA 2004c, 2004d; Farías 2002; Fazio 1997, 2001; Figueroa 1998; Ibáñez and Pizarro 2003; Lavandero 1999, 2001, 2003; Riesco 2000, 2001a, 2002, 2003.

¹⁴ Anglo American Plc recently confirmed this \$575 million tax credit, when approached on the matter by the London *Guardian* newspaper that was working on a series of articles on CSR and tax behaviour.

¹⁵ See Caputo 1996; Figueroa 1998; Lavandero 1999, 2001, 2003; Federación de Trabajadores del Cobre 1999; Caputo et al. 2000, 2001; CENDA 2001, 2004c, 2004d; Farías 2002; Fazio 1997, 2001; Ibáñez and Pizarro 2003; Riesco 2000, 2001a, 2002, 2003.

¹⁶ In 1995, Professor Orlando Caputo of the Universidad de Artes y Ciencias Sociales (ARCIS) calculated that planned increases in Chilean copper production over the next five years surpassed even the most optimistic estimates of increases in world copper demand. A drastic fall in prices, therefore, was to be expected if the Chilean government took no counter-measures. As it turned out, Chilean copper production grew even more than the estimate, world demand grew less, and prices fell more than 50 per cent, even more than was anticipated by Caputo (1996). Together with other academics and institutions, including the Centro de Estudios Nacionales de Desarrollo Alternativo (CENDA), Caputo publicly denounced this situation, and lobbied the government (Caputo et al. 2000, 2001). ARCIS students and academics even staged a monthly sit-in in front of the presidential palace to denounce the problem, but nobody seemed to listen. On the contrary, Caputo's study, as well as other works that supported his analysis, were officially disqualified by government specialists, as well as the private industry and many academics, all of whom stressed that Chile was a "price taker" and had no influence on world copper prices. They also disregarded the existence of ground rent associated with copper mines. The only relevant political authorities who took the matter seriously were Senator Jorge Lavandero of the governing coalition and Juan Villarrú, a senior government official who had headed

members of the Chilean National Congress representing all political parties, the Chilean government introduced a bill establishing a 3 per cent royalty on copper sales by large mining companies (Chilean Government 2004).

Outflows of Profits to Service Loans

How could Exxon elude the Chilean taxing laws and declare accounting losses for a company that was, in fact, profitable, as the selling price proved?

This was achieved mainly through outflows of profits to service loans from financial affiliates in offshore havens.¹⁷ In this particular case, Exxon overindebted Disputada de Las Condes to the point that it was technically bankrupt for many years; that is, its net equity became negative due to cumulative accounting losses. The creditor was Exxon Financials, Exxon's Bermuda-based financial branch. Huge interest payments were expatriated from Disputada de Las Condes to Exxon Financials over the years. The vice-president of Disputada de Las Condes himself recognized this fact, stating that "96% of liabilities correspond to loans from headquarters or the Bermuda subsidiary, that is why Exxon withdraws interest payments instead of profits".¹⁸ Instead of the 35 per cent regular rate for expatriated profits, under Chilean law, interest payments are subject to a 4 per cent tax, or none at all, as explained below (Lagos and Torrens 2000).

This practice has been common in the Chilean private mining industry, whose mean debt/equity ratio¹⁹ in 1997 was 3.5 to 1, with one company reaching 17 to 1 and another, Exxon, carrying a negative ratio, due to negative equity (Servicio de Impuestos Internos [SII], cited in CENDA 2001). Chilean tax laws have been quite lax in this respect, although a 2001 reform "against tax avoidance"²⁰ established a limit of 3 to 1 in the debt/equity ratio, over which companies must now pay a 35 per cent tax on expatriated interest payments. The government originally proposed a lower limit, but it was raised by the National Congress (Chilean Senate 2003o, 2003p; CENDA 2004a: 1–30/5/2001).

Abusing Tax Incentives

Mining companies also avoid taxes through overextending what is known as the "accelerated depreciation mechanism", which, under Chilean law, allows companies to deduct asset depreciation from profits at an accelerated rate.²¹ All private mining

CODELCO for many years. Both have persistently called for radical changes in Chilean mining policies (Chilean Senate 2003h–2003i).

¹⁷ See Caputo 1996; Caputo et al. 2000, 2001; CENDA 2004c, 2004d; Farías 2002; Fazio 1997, 2001; Figueroa 1998; Ibáñez and Pizarro 2003; Lavandero 1999, 2001, 2003; Riesco 2000, 2001a, 2002, 2003.

¹⁸ See Lavandero 1999, 2001, 2003; Fazio 1997, 2001; CENDA 2001, 2004a: 18/07/2001, 2004c, 2004d.

¹⁹ This ratio is calculated by dividing the total outstanding debt of the company by its equity; both figures are in the balance sheet. The ratio 3.5 to 1 means that the mining companies as a whole owe three and a half times their own equity.

²⁰ Identificación de la Norma: LEY–19738; Fecha de Promulgación: 15.06.2001; Fecha de Publicación: 19.06.2001; Organismo: Ministerio de Hacienda; Última Modificación: Ley–19912, 04.11.2003.

²¹ Under this tax incentive, companies may depreciate assets in shorter periods and reduce profits in the short run. For example, machinery that is depreciated in 10 years in a firm's financial statements may be depreciated in three years for taxing purposes. This tax incentive (in theory) allows companies to

companies, with the sole exception of BHP Billiton's Escondida—the only private company that has paid relevant taxes—use this mechanism of accelerated depreciation to reduce tax payments (Lagos and Torrens 2000).

Overindebtedness and accelerated depreciation are mechanisms that any company in Chile can use. In the case of private mining companies, though, their effect is increased through a loophole that enables these companies to declare themselves *Sociedades Contractuales Mineras* (SCMs), instead of regular publicly listed companies, which in Chile are called *Sociedades Anónimas* (SAs). The SCM is a form of incorporation established long ago to promote small and medium mining. Mining companies that produce less than 75,000 tonnes of copper a year are allowed to incorporate themselves as SCMs, instead of SAs. Under their SCM status, private mines in Chile can benefit from at least two relevant tax exemption schemes. Expatriated interest payments do not pay the 4 per cent tax that the same transfers are subject to in SAs. And profits may be withdrawn without paying taxes, even if net income calculated with accelerated depreciation for tax purposes is negative. In SAs, such early withdrawals are taxed at the 35 per cent rate (Lagos and Torrens 2000).

Due to these two factors, long-term taxes have been estimated to be 18 per cent higher for an SA than for an SCM (Lagos and Torrens 2000). In this sense, according to the Economic Commission for Latin America and the Caribbean (ECLAC), mining corporations in fact receive a significant tax subsidy in relation to other corporations (Mouguillansky 1998). This explains why, in clear violation of the spirit of this law²², large private mining companies have incorporated themselves as SCMs, even though their production hugely exceeds the mentioned 75,000 tonne limit. BHP Billiton's Minera Escondida, for example, produced nearly a million tonnes of pure copper a year in the late 1990s (see table I.2), making it by far the largest copper mine in the world.²³ Nevertheless, during the 1990s, even Escondida was considered a “medium mining operation” under Chilean law.²⁴ Due to this fiction, all large mines in Chile were legally registered as “medium mines”, with the exception of state-owned CODELCO.²⁵

defer taxes from early years to latter periods, because profits calculated for tax purposes using this mechanism will be lower than regular profits in the early years due to increased depreciation charges during those years. Conversely, profits calculated for taxing purposes should be larger than regular profits in later periods, as depreciation charges have already been posted. As the purpose of this tax incentive is to promote investments, companies may not withdraw the profits that have not been taxed because of this mechanism. If they want to withdraw these profits, they have to pay full taxes on them. Mining companies in Chile have managed to depreciate successive investments in such a way that their profits calculated using this mechanism have been diminished substantially. On the other hand, by incorporating themselves as *Sociedades Contractuales Mineras* they managed to withdraw profits without paying taxes.

²² The SCM law states that its purpose is to benefit all small and medium mining companies, but lawmakers defined small and medium mines as those that produce no more than 75,000 tons a year of “refined” copper (instead of “pure copper”, as it should perhaps say). Accordingly, none of the large private mines produce more than 75,000 of “refined” copper, because they export the rest in the form of concentrates.

²³ Chuquicamata, the second largest, owned by CODELCO, produces around 600,000 tons a year.

²⁴ Until 2001, Escondida was incorporated as two different companies: Minera Escondida SA ran the operations and Sociedad Contractual Minera Escondida owned the mine itself. The first company paid a royalty of 5 per cent of total revenues to the second one for the use of the mine. The second company was eliminated in 2002, after the “anti-tax avoidance law” of 2001 eliminated some of the loopholes that prompted mining companies to incorporate themselves as an SCM.

²⁵ This loophole was partially addressed for future operations, by the 2001 reform “against tax avoidance”.

Table I.2: Escondida business results (thousand US dollars per year, except where indicated) ^{(a.)(b.)(c.)}

Items	1998	1999	2000	2001	2002	1998–2002 (average)	1998–2002 (% of production- revenue)
Copper production (tonnes of pure copper)	919,000	958,518	916,624	794,131	757,959	869,246	100.0
Copper shipments (tonnes of pure copper)	887,700	958,519	881,540	786,720	741,289	851,154	97.9
In the form of concentrates (tonnes of pure copper)	830,500	826,766	731,826	641,547	598,523	725,832	83.2
Revenues	1,119,101	1,174,137	1,304,592	959,439	933,227	1,098,099	100.0
Copper	1,072,924	1,126,447	1,266,305	926,539	892,028	1,056,848	96.2
Self-production	1,072,924	1,126,447	1,256,530	926,539	886,006	1,053,689	95.9
Bought to third parties	0	0	9,775	0	6,022	3,159	0.3
By-products	46,177	47,690	38,287	32,900	41,199	41,251	3.8
Cost of sales	(589,350)	(646,583)	(648,923)	(618,144)	(675,016)	(635,603)	-58.8
Of sales of self-production	NA	NA	NA	NA	NA	NA	NA
Of third party copper	NA	NA	NA	NA	NA	NA	NA
Gross margin	529,751	527,554	655,669	341,295	258,211	462,496	41.2
Sales and administration expenses	(5,381)	-	(1,170)	(8,368)	(7,109)	(4,406)	-0.4
Net operational margin	524,370	527,554	654,499	332,927	251,102	458,090	40.7
Interest payments	(35,305)	(89,460)	(112,220)	(90,572)	(73,920)	(80,295)	-7.3
Other non-operational results	4,791	(173,270)	1,531	(379)	(3,524)	(34,170)	-2.9
Pre-tax income	493,855	264,824	543,810	241,976	173,658	343,625	30.4
Taxes	(73,206)	(43,770)	(84,469)	(49,151)	(30,026)	(56,125)	-5.0
Net income	420,649	221,054	459,341	192,825	143,632	287,500	25.0

Notes:

(a.) Escondida includes Soc. Contractual Minera Escondida.

(b.) Comparative results with CODELCO are presented in table I.3.

(c.) Monetary values are presented in parenthesis when negative. NA = data not available; 0 = the quantity is zero.

Source: CENDA (2004b:table 1.2).

Foreign direct investment has been lured to Chile by the generous conditions of Decreto con Fuerza de Ley 600, or DFL 600, a law promulgated by Pinochet back in the early 1980s. One of the important benefits of DFL 600 is that companies may establish contracts with the Chilean state that guarantee them invariable tax treatment. That is, if the state changes tax rules, the investor who adopts this guarantee is not required to comply with the new rules. In exchange for the guarantee, DFL 600 raises the tax rate on net profits exported, from 35 per cent to 40 per cent.

As mentioned above, most private mining companies, with the exception of Escondida, which no longer uses the accelerated depreciation mechanism, have incorporated themselves as SCMs. This has enabled them to withdraw profits without paying taxes, as long as accelerated depreciation or other schemes let them post accounting losses for taxation purposes.²⁶ This loophole was eliminated through the 2001 “anti-tax avoidance” law, promoted by current Chilean Finance Minister, Nicolas Eyzaguirre. Nevertheless, as most large private mining companies had adopted the guarantee under DFL 600, they have continued to use it to export profits without paying any taxes at all. Meanwhile, they declare accounting losses due to accelerated depreciation. According to the Chilean taxation agency, SII, until the end of 2002, the mining companies had used this mechanism to export \$399.9 million in profits without paying taxes (CENDA 2004a: 29/02/2004).

Minister Eyzaguirre recently became embroiled in a dispute with the private mining companies, when he publicly reminded them of this fact and asked them to voluntarily avoid using this mechanism. Otherwise, he said, it would not be possible from a political standpoint to sustain the current government position against mining royalties. The Consejo Minero, an institution that groups the large mining companies, responded with a bristling attack on the minister, reminding him that the mechanism they were using was perfectly legal, which, of course, is true—as is the fact that they are abusing it (CENDA 2004a: 7/01/2004).

Other Schemes

The above-mentioned schemes are not the only tax avoidance mechanisms used by foreign corporations that operate large mines in Chile, just the ones that have been fully investigated.

There are also concerns that large mining corporations underprice the copper they sell to related firms. It has also been denounced that they do not fully account for the gold, molybdenum and other precious and high-value metals usually included in copper concentrates, which is the form in which they export most of their production. In addition, even the exported quantities could be subject to manipulation if there were agreement between the seller and the buyer. This is quite feasible, given the fact that companies sell concentrates to their refining subsidiaries or owners in other countries.

These and other tax avoidance schemes are presently being investigated by the Chilean National Congress. In the process, the congressional investigation has established that the state departments in charge of regulating aspects, such as those

²⁶ In Chile, as in other countries, companies report both their accounting profits and their taxing profits. The latter are usually lower than the former, because they take advantage of several (legal) tax benefits, such as accelerated depreciation, for example.

mentioned above, are seriously understaffed and underfunded (Chilean Senate 2003a–2003q).

The Case of BHP Billiton’s Minera Escondida

Only two of the 14 large private mining companies that operate in Chile have ever paid any taxes. However, one of the two, Mantos Blancos, owned by Anglo American Plc, had paid only \$45 million in taxes until 2002 (Chilean Senate 2003f). Nevertheless, one large private mining company reported almost \$1.7 billion in taxes from 1991 to 2002.²⁷ This amount accounts for almost the total amount of taxes paid by private mining companies during the same period. This company is BHP Billiton’s Minera Escondida.

BHP Billiton is without any doubt signalling a different approach to this matter, and the company seems to be making a case in point of being socially responsible in relation to taxation, as well as other matters. In relative terms, BHP Billiton behaves apparently as a model company and, seemingly, honours its reputation as leader in the international CSR movement.

CSR Leader

Escondida is reputed to exploit the best copper deposits in the world, which contain over 50 million tonnes of pure copper in proven reserves of high-quality minerals. At the present rates of exploitation of one million tonnes of pure copper a year, such reserves guarantee 40 years of production. This output is roughly the equivalent of one eleventh of world copper exports and one thirteenth of world copper production (COCHILCO 2003).

The Escondida mine is located in the Atacama Desert in the northern part of Chile, some 170 kilometres to the southeast of the port of Antofagasta. It produces copper concentrate out of sulphured minerals and pure copper cathodes out of lixiviation of oxide minerals. All the minerals are extracted from open pit mining operations, which move 350 million tonnes of material a year, about a million tonnes of material a day. The concentrates are pumped through pipes to the port for shipping.

The mineral deposits were discovered on 14 March 1981 by a small group of mining experts, most of them Chileans.²⁸ The construction of the mine started in 1988 and the processing of minerals began in November 1990, just a few months after the first democratically elected government terminated the Pinochet dictatorship. With the exception of Exxon’s Disputada de Las Condes, it was also the first large private mining operation in Chile. All other private copper mines in Chile at that time were small or medium-sized operations. State-owned CODELCO and ENAMI, for their part, accounted for over 80 per cent of copper exports (COCHILCO 2003).

²⁷ In fact, taxes actually paid are frequently even less than taxes reported as paid in company balance sheets. The difference comes from tax returns from different sources, including huge value added tax (VAT) returns from exports (Chilean Senate 2003a, 2003b).

²⁸ One of the experts, who was part of the group who made the 1981 discovery, told this author that the cost of the overall exploration campaign, which covered hundreds of square kilometres, did not exceed \$5 million at the time.

The owners of Minera Escondida today are BHP Minera Escondida (57.5 per cent), Rio Tinto Escondida Ltd. (30 per cent), Japan Escondida Corporation (JECO) (10 per cent), and the International Finance Corporation (IFC) (2.5 per cent) (see table I.1).²⁹ After successive phases of expansion, total investment in Escondida currently exceeds \$4 billion (Minera Escondida 2002).

Apart from being the only large private mining company operating in Chile today that pays taxes, Escondida devotes 1 per cent of its pre-tax profits to projects in Chile, focusing mainly on environmental protection, education, health and community development, with a particular focus on youth. Such expenditures amounted to \$21 million from 1998 to 2002, channelled through Fundación Escondida, a non-profit foundation, to local communities, universities, cultural events and several other initiatives.

The company president dedicates a long paragraph of his 2002 speech to shareholders to a five-year project called Artificial Incubation and Feeding of Flamingo Chicken. Under this initiative, 73 flamingos (*Phoenicoparrus andinus*) were returned to their original habitat. It is part of a larger project centred on the mitigation of environmental impact on Salar de Punta Negra (salt lakes), which is related to water extraction for Escondida. He mentions that the project not only enhanced local confidence in the firm, but also provided the scientific community, both in Chile and abroad, with an important conservation tool and scientific knowledge regarding the habitat of salt lakes. A section of the company's 2002 *Memoria Anual y Balance* is dedicated to School F-89, a primary school in Antofagasta where, thanks to Fundación Escondida, a modern building of 4,723 square metres was built, school enrolment increased from 320 to 640 pupils, and the time students attended school each day was extended. The school also improved its academic results and ranking with respect to others. Another initiative supported by Fundación Escondida is the regional literary tournament in Antofagasta, in which 200 writers participate.

With regard to environmental protection, all Escondida's operations have International Organization for Standardization (ISO) 14001 certification. The same standards have been extended to several of the company's contractors, some of which have become the first small Chilean enterprises to obtain ISO 14001 certification. Other environmental initiatives mentioned in Escondida's *Memoria Anual y Balance* include support for environmental conferences and other activities nationwide, including a convention against the trafficking of endangered species.

Escondida is also renowned for decent labour relations, and figures consistently on the "most wanted to work in" list of companies operating in Chile, although a strike did take place in 2003.

Perhaps even more important for Chile than all the above, on 8 December 2001, Escondida, together with CODELCO, led the copper industry in reducing output, as a

²⁹ In 1979, Minera Utah de Chile and Getty Mining (Chile) Inc. agreed on a joint mining exploration programme in the north of Chile. In 1985, Getty Mining sold its 50 per cent share to JECO, RTZ Escondida Holdings Ltd. and Minera Utah de Chile Inc. In 1988, Minera Utah de Chile Inc., RTZ Escondida Holdings Ltd. and JECO, in turn, transferred their rights to BHP Escondida Inc., Rio Tinto Escondida Ltd., previously RTZ Escondida Ltd., and JECO, and BHP Escondida transferred 2.5 per cent of its rights to the IFC, a subsidiary of the World Bank.

way of restraining overproduction. Overproduction by private companies exploiting Chilean mines—encouraged by the permissive Chilean legislation and the complacency of experts and authorities—had led to a world copper glut. Escondida and CODELCO’s decisive action of withholding production stopped the free fall of the price of copper, and demonstrated that it was indeed caused by overproduction. Such action has since been repeated when copper stocks have risen. More recently, higher copper prices have been sustained by the recovery of world demand for copper.

Financial Results: Minera Escondida versus CODELCO (1998–2002)

Despite the positive record and reputation of Escondida, this paper raises serious concerns that even a model CSR company like BHP Billiton may have engaged in pricing practices that have resulted in the underreporting of profits in Chile and, therefore, lower taxes. Such concerns emerge from a comparison of the business results of Escondida with those of CODELCO, the state-owned mining company. Escondida is the only private mining company that makes its balance sheets public, while all others are incorporated under a legal form that enables them to keep their books private.

Comparison of the balance sheets of both companies reveals bottom lines that are roughly similar, as expressed in pre-tax income per tonne of copper produced. This seems quite odd, however, considering CODELCO operates mines that are a century old, with costly labour and administrative structures. Meanwhile, Escondida has one of the most modern mining operations in the world, as well as the world’s largest and best copper deposits, with the lowest unit costs in the industry worldwide. Copper contents in the minerals mined by CODELCO average less than 1 per cent, with most of them being sulphurs that require expensive smelting (CODELCO 2003). Escondida, meanwhile, has copper contents of nearly 2 per cent, with a higher proportion of oxides, which may be refined without smelting. According to Kenneth Pickering, chief executive officer (CEO) of Escondida, it is “the private mining project of the century” (Pickering 2001).

How can this be? How can CODELCO achieve the miracle of reaching a similar bottom line as Escondida, with the heavy burdens it carries?

CODELCO pays almost three times as much tax as Escondida, for every tonne of pure copper produced. Between 1998 and 2002 CODELCO paid, on average, \$182 in taxes and royalties for every tonne produced, while Escondida paid \$64 per tonne produced. CODELCO’s total tax bill amounted to an annual average of \$396.4 million (see table I.3). But, of course, CODELCO is a state-owned company, and as such, must pay a royalty of 10 per cent of sales directly to the military and a special 12 per cent surtax, over and above the normal 17 per cent tax every company operating in Chile must pay on profits. Pre-tax income per tonne produced, on the other hand, is very similar for both companies, with Escondida achieving \$388 per tonne in pre-tax income, compared to \$305 per tonne for CODELCO, both yearly averages for the five-year period from 1998 to 2002 (see table I.4).³⁰

³⁰ Actually, CODELCO’s pre-tax income exceeded those of Escondida in 1999 and was practically equal in 2002, as well as over the 1999–2002 period. Escondida’s pre-tax income was just above those of CODELCO in 2001, higher in 2000, and much higher in 1998. Taking the 1998–2002 period as a whole, average pre-tax income of Escondida slightly exceeded those of CODELCO. Nevertheless,

Moving up the balance sheet, the answers to the questions above may be found, in part, in the lower unit interest payments that CODELCO enjoys (roughly half as much) in relation to Escondida. This is because CODELCO's debt/equity ratio is roughly half Escondida's. Escondida's debt/equity ratio, although high for other industries, seems quite conservative in the Chilean mining industry where, as mentioned above, some companies maintain very high values for this ratio. Furthermore, CODELCO's higher sales and administrative costs (roughly 12 times greater) relative to Escondida quickly offset the modest gains in interest payments.

Further up the balance sheet, one may find that CODELCO manages to achieve overall and net operational margins per tonne produced that are lower, but still comparable to Escondida's, even though the unit cost of sales is indeed much higher for CODELCO than for Escondida (roughly twice as much) as one would have expected (table I.3).

The mystery persists until one reaches the very first line of the balance sheet, which reveals a surprise: CODELCO manages to obtain unit revenues per tonne of copper produced that are 60 per cent higher than those received by Escondida. How is this possible? The answer is fairly straightforward: over the 1998–2002 period every dollar of CODELCO revenue includes 67 cents from sales of self-produced copper, 25 cents come from third party copper sales and 8 cents from by-products, mainly molybdenum, gold and silver.

In contrast, Escondida is exclusively a copper mining operation (rather than a copper trader), although Escondida also reports tiny sales of third-party copper. In addition, 5 per cent of its revenue is obtained from gold and silver, included in the concentrates it sells.

COCHILCO experts told this author that 1998 net income is exceptionally high in the case of Escondida because it changed its reporting date that year to comply with Chilean practices. As a result, parts of the 1997 earnings were included in the 1998 figures (CENDA 2004b).

Table I.3: Comparative business results, CODELCO versus Escondida (thousand US dollars per year, except where indicated) ^(a.)

Items	Escondida			CODELCO		
	2002	1998–2002 (average)	1998–2002 (% of production- revenue)	2002	1998–2002 (average)	1998–2002 (% of production- revenue)
Copper production (tonnes of pure copper)	757,959	869,246	100.0	1,630,056	1,611,442	100.0
Copper shipments (tonnes of pure copper)	741,289	851,154	97.9	1,934,000	1,843,052	114.1
In the form of concentrates (tonnes of pure copper)	598,523	725,832	83.2	0	0	0
Revenues	933,227	1,098,099	100.0	3,489,879	3,260,776	100.0
Copper sales	892,028	1,056,848	96.2	3,329,579	3,000,545	91.9
Self produced copper	886,006	1,053,689	95.9	2,223,128	2,171,636	66.7
Copper bought by third parties	6,022	3,159	0.3	1,106,451	828,909	25.2
By-product sales	41,199	41,251	3.8	160,300	260,231	8.1
Cost of sales	(675,016)	(635,603)	-58.8	(2,786,942)	(2,545,160)	-78.1
Of sales of self-production	NA	NA	NA	(1,750,968)	(1,791,106)	-55.2
Of sales of third party copper	NA	NA	NA	(1,035,974)	(754,054)	-22.9
Gross margin	258,211	462,496	41.2	702,937	715,616	21.9
Sales and administration expenses	(7,109)	(4,406)	-0.4	(159,676)	(102,440)	-3.1
Net operational margin	251,102	458,090	40.7	543,261	590,660	18.1
Interest payments	(73,920)	(80,295)	-7.3	(77,046)	(95,538)	-3.0
Other non-operational results	(3,524)	(34,170)	-2.9	(96,760)	(3,092)	0.0
Pre-tax income	173,658	343,625	30.4	369,455	492,031	15.1
Taxes (includes 10% royalty paid to defence and other payments in the case of CODELCO)	(30,026)	(56,125)	-5.0	(320,979)	(396,143)	-12.2
Net income	143,632	287,500	25.4	48,476	95,887	3.0

Notes:

(a.) Escondida includes Soc. Contractual Minera Escondida. CODELCO includes its proportion of production of El Abra.

Source: CENDA (2004b:table 1.3).

Table I.4: Business results per unit of revenue and production, CODELCO versus Escondida
Per unit revenue and production (% - US\$/tonne) ^(a.) ^(b.)

Items	Escondida		CODELCO		Difference CODELCO- Escondida
	2002	1998–2002 (average)	2002	1998–2002 (average)	1998–2002 (average)
Revenue/Copper production (US\$/tonne)	1,231	1,261	2,141	2,020	758
Incl.: Revenue from self-produced copper/copper production (US\$/tonne)	1,169	1,210	1,364	1,345	135
Revenue from third party copper/Copper production (US\$/tonne)	8	4	679	513	509
Revenue from by-products/Copper production (US\$/tonne)	54	48	98	162	114
Revenue from copper sales/Copper shipments (US\$/tonne)	1,203	1,240	1,722	1,625	385
Copper price, London Metal Exchange (US\$/tonne)	1,557	1,635	1,557	1,635	0
Gross underpricing (Revenue from copper sales – (minus) copper price) (US\$/tonne) ^(c.)	(354)	(395)	164	(10)	385
Cost of sales/Revenue (%)	-72%	-59%	-80%	-78%	-19%
Cost of sales/Copper production (US\$/tonne)	(891)	(739)	(1,710)	(1,576)	(837)
Incl.: Cost of sales of self-produced copper/Copper production (US\$/tonne)	NA	NA	(1,074)	(1,110)	(1,110)
Gross margin/Revenue (%)	28%	41%	20%	22%	-19%
Gross margin/Copper production (US\$/tonne)	341	523	431	444	(79)
Sales and administration expenses/Copper production (US\$/tonne)	(9)	(5)	(98)	(63)	(58)
Net operational margin/Revenue (%)	27%	41%	16%	18%	-23%
Net operational margin/Copper production (US\$/tonne)	331	517	333	366	(151)
Interest payments/Revenue (%)	-8%	-7%	-2%	-3%	4%
Interest payments/Copper production (US\$/tonne)	(98)	(93)	(47)	(59)	34
Pre-tax income/Revenue	19%	30%	11%	15%	-15%
Pre-tax income/Copper production (US\$/tonne)	229	388	227	305	(83)
Pre-tax income/Copper shipments (US\$/tonne)	234	398	191	268	(130)
Taxes/Revenue	-3%	-5%	-9%	-12%	-7%
Taxes/Copper production (US\$/tonne)	(40)	(64)	(198)	(246)	(182)

Notes:

(a.) Escondida includes Soc. Contractual Minera Escondida. CODELCO includes its proportion of production of El Abra.

(b.) Calculations in this table are based on table I.2. Except where indicated, all prices in this table that refer to Escondida are expressed as averages per total tonne of payable copper sold by Escondida, including both concentrates and cathodes. That means they have been adjusted regarding the proportion of copper sold as concentrates, and the copper content in concentrates, as informed by Escondida for each year.

(c.) Most, but not all, of this underpricing is explained by the high refining costs paid by Escondida, which sells most of its copper in the form of concentrates. The differences are detailed in table I.5.

Sources: CENDA (2004b:table 1.4).

However, revenues from by-products do make an important difference. CODELCO's sales of molybdenum, gold, silver and other precious metals, which represent 8 per cent of its overall revenues, amount to \$162 per tonne of copper produced, over three times as much as Escondida's \$48 revenue from precious metals per tonne of copper produced (see table I.4). It is not that Escondida's mineral carries less of these precious bedfellows of copper, but rather that Escondida does not extract them from the concentrates it sells. It only declares estimates of the gold and silver content. A simple calculation may indicate the impact of the revenue difference from precious metals. Multiplying the \$114 per tonne difference between Escondida's and CODELCO's by-product revenue by 869,246 tonnes produced annually by Escondida (the 1998–2002 average) yields \$101.5 million of lost revenues by Escondida. This amounts to 29.5 per cent of Escondida's 1998–2002 average pre-tax income of \$343.6 million a year.

On the other hand, the unit price of copper per tonne shipped by Escondida to its customers is substantially lower than the London Metal Exchange (LME) price for the same period. Meanwhile, in the case of CODELCO, the unit price of its copper shipments to customers almost exactly equals the LME price for the same period. As an average, each tonne of pure copper shipped to customers generated revenues of \$1,240 for Escondida during the 1998 to 2002 period (see table I.4). Meanwhile, CODELCO received \$1,625 for each tonne of copper shipped, a price almost identical to the average price of copper for the period on the LME (\$1,635 per tonne of pure copper).

Over 85 per cent of Escondida's copper is sold in the form of concentrates at free on board (FOB) prices. CODELCO, in contrast, sells cathodes of refined copper and receives premium cost, insurance and freight (CIF) prices. This explains, in part, the lower price at which Escondida is selling its copper. Refining and shipping charges that need to be taken into account when comparing its prices to those of CODELCO explain most of Escondida's underpricing. Nevertheless, even after discounting reasonable refining charges (that include smelting and refining proper), as well as shipping charges, Escondida's average price for the 1998–2002 period remains \$52.4 per tonne below the LME copper price (see table I.5).

Escondida reports refining charges that are higher than market refining prices. Escondida reports average refining charges of \$327.4 per tonne of pure copper sold. Meanwhile, the market refining charges reported in Escondida's *Memoria Anual y Balance* averaged \$312.9 and \$191.2 per tonne of pure copper, for contracts and "spot" deals, respectively, namely, a difference of \$14.5 and \$136.2 per tonne of pure copper, respectively. It must be recalled that some of Escondida's main customers for concentrates are related companies that are part of the BHP Billiton's global corporate structure, or are joint owners of Escondida. One of these refiners, JECO, owns 10 per cent of Escondida. Escondida's concentrates are refined by smelters and refiners based on long-term contracts, some of which were signed back in 1989 as a precondition for obtaining finance for investments. Thanks to these long-term contracts, the banks that financed Escondida felt reassured that the company was going to be able to sell its huge concentrate outputs.

Table I.5: Minera Escondida: Differences in transfer prices of copper and by-products, refining and shipping costs, and impact on income and taxation
US\$/tonne of payable copper sold ^{(a.) (b.)(c.)}

Items	1998	1999	2000	2001	2002	1998–2002 (average)
Overall copper selling price difference: Escondida (minus)	(444.2)	(398.5)	(377.8)	(400.0)	(354.2)	(394.9)
Refining cost	450.9	334.2	304.5	268.0	279.4	327.4
Shipping costs	63.2	60.1	68.1	60.9	61.1	62.7
By-products discount	(50.2)	(49.8)	(41.8)	(41.4)	(54.4)	(47.5)
Net selling price difference	(19.6)	53.9	47.0	112.6	68.0	52.4
Refining costs, Escondida	450.9	334.2	304.5	268.0	279.4	327.4
Market refining prices, contracts	367.5	334.8	324.9	288.9	248.5	312.9
Market refining prices, spot	216.2	223.2	243.7	190.0	82.8	191.2
Refining charges differences: Escondida (minus) contracts	83.4	(0.5)	(20.5)	(20.9)	30.8	14.5
Refining charges differences: Escondida (minus) spot	234.7	111.1	60.8	77.9	196.5	136.2
By-products discount, Escondida	50.2	49.8	41.8	41.4	54.4	47.5
CODELCO by-products revenues	192.3	167.3	185.6	166.4	98.3	162.0
By-products revenue difference: CODELCO (minus) Escondida	142.0	117.6	143.9	125.0	44.0	114.5
Net selling price difference	(19.6)	53.9	47.0	112.6	68.0	52.4
Refining charges differences: Escondida (minus) contracts	83.4	(0.5)	(20.5)	(20.9)	30.8	14.5
Refining charges differences: Escondida (minus) spot	234.7	111.1	60.8	77.9	196.5	136.2
By-product revenue difference: CODELCO (minus) Escondida	142.0	117.6	143.9	125.0	44.0	114.5
Total difference A (contract)	205.8	170.9	170.4	216.7	142.8	181.3
Total difference B (spot)	357.1	282.5	251.6	315.5	308.5	303.1
Estimated total revenue losses due to: (thousand US dollars)						
Net selling price difference	(18,050)	51,619	43,055	89,441	51,561	43,525
Refining charges differences: Escondida (minus) contracts	76,657	(510)	(18,746)	(16,599)	23,370	12,834
Refining charges differences: Escondida (minus) spot	215,721	106,455	55,714	61,876	148,958	117,745
By-product revenue difference: CODELCO (minus) Escondida	130,530	112,686	131,876	99,259	33,339	101,538
Total difference A (contract)	189,137	163,795	156,185	172,101	108,270	157,898
Total difference B (spot)	328,202	270,760	230,644	250,576	233,858	262,808
Estimated impact on pre-tax revenues (%) (c.)						
Net selling price difference	-4%	19%	8%	37%	30%	13%
Refining charges differences: Escondida (minus) contracts	16%	0%	-3%	-7%	13%	4%
Refining charges differences: Escondida (minus) spot	44%	40%	10%	26%	86%	34%
By-product revenue difference: CODELCO (minus) Escondida	26%	43%	24%	41%	19%	30%
Total difference A (contract)	38%	62%	29%	71%	62%	46%
Total difference B (spot)	66%	102%	42%	104%	135%	76%

Notes: (a.) Escondida includes Soc. Contractual Minera Escondida. CODELCO includes its proportion of production of El Abra.

(b) All prices and costs in this table, except where indicated, are expressed as averages per total tonne of payable copper sold by Escondida, including both concentrates and cathodes. That means they have been adjusted regarding the proportion of copper sold as concentrates, and the copper content in concentrates, as informed by Escondida for each year.

(c) The percentages in the following six lines are calculated dividing the monetary figures in the above six lines by the pre-tax earnings of Escondida for each year from table I.2. Percentages in the final “average” column are calculated from the average monetary figures above, in that same column.

Sources: Calculations in this table are based on table I.2, and data from CENDA (2004b:table 1.5).

Regarding shipping charges, Escondida acknowledges average charges of \$62.5 per tonne of pure copper for the 1998–2002 period (see table I.5). It must be mentioned that Escondida arranges its shipping through BHP Transport and BHP Marine and General Insurance Pty Ltd.³¹

Adding up the three elements above—\$52.4 of unaccounted copper selling price differences, \$114.5 associated with underpricing of by-products, and a range of \$14.5 to \$136.2 related to overpricing for treatment—overall price differences range from \$181.3 to \$303.1 per tonne of pure copper sold (see table I.5). In other words, if Escondida had sold at LME prices minus market refining and shipping charges, and received for its by-products as much as CODELCO did, it would have received extra revenues within the indicated range for each tonne of pure copper sold.

Such figures, multiplied by 869,242 tonnes of copper produced on average per year by Escondida between 1998 and 2002 (see table I.2), amount to lost revenues within the range of \$157.9 million to \$262.8 million a year. This amounts to a range of 46 to 76 per cent of Escondida's pre-tax revenues during the period, which averaged \$344 million per year. The impact in relation to taxes would have been similar—that is, Escondida would have paid the Chilean state between 46 per cent and 76 per cent more taxes, on average, during the period under study, if it had managed its sales policy as did CODELCO.

Escondida's 2002 *Memoria Anual y Balance* has a revealing paragraph regarding this matter.

Year 2002 marked a turning point in the history of Escondida because the commercial contracts that were tied to the original financial contracts that the company had with a consortia of Japanese smelters, Norddeutsche Affinerie (Germany) and Outokumpu (Finland) expired at the end of this year. These contracts made it possible to obtain the financing that facilitated the construction of the Escondida project. We express our gratitude for the effort of these special customers (Minera Escondida 2003:31 [author's translation]).

The above figures suggest that, over a decade, Escondida may have found a subtle but generous manner of expressing its gratitude to its "special customers". Moreover, the Chilean state, perhaps inadvertently, facilitated this situation.

Free Raw Materials

From the above, it is clear that large transnational mining corporations have been able to use accounting schemes that are not available to other companies in Chile to avoid normal taxation on profits. In this sense, they constitute a privileged segment of the business community. Nevertheless, the importance of this significant privilege pales in comparison with the enormous advantage large mining companies have in not paying for the land and raw materials they use. The mining ores that lie underground,

³¹ Each year, Escondida's *Memoria Anual y Balance* reports many other items that correspond to payments to BHP affiliates. In 2000, 2001 and 2002, Escondida paid \$110 million, \$80 million and \$87 million, respectively, to affiliated companies for services rendered. These figures do not include refining charges (Minera Escondida 2001, 2002, 2003).

which are the property of the Chilean state, are made available to mining companies at practically zero cost.³²

In any economic sector not associated with natural resources, a business that wants to commence operations will have to pay for all of the factors of production, including ground rent for the land it occupies. In addition, of course, it will pay for its raw materials. If the business needs to be established on a valuable piece of land, it will have to pay a high rent to the rightful owner or buy it for a high price; and the finer the quality of the raw materials, the higher their price will be. These basic rules, however, do not apply in the case of corporations exploiting Chilean mines. Under the current Chilean mining policy, they are entitled to use the finest raw materials on earth with no limitations and at almost zero cost, because the Chilean state, the rightful owner of such prime raw materials, charges practically nothing for them.

In this sense, there is a huge subsidy from the Chilean state in favour of firms exploiting natural resources, notably in the case of copper. This subsidy stems from the fact that the neoliberal-inspired Chilean legislation assumes that there is no difference among economic sectors. This disregards the fact that some of them operate over scarce (and in some cases depleting) natural resources that generate ground rent.

This subsidy stems from mining legislation enacted by the Pinochet dictatorship in 1981.³³ Through that reform, the Chilean state offered private investors the possibility of indefinite leases over mining districts, even though the property of the same remains “inalienably” in the hands of the Chilean state, according to the terms of the original 1971 nationalization act, which are still valid under the present Constitution decreed by Pinochet in 1981. These attractive investment conditions, however, did not produce the expected results until the dictatorship ended in 1989. Up to that time, there was only one large private project being developed, namely Escondida, while CODELCO accounted for all production in the large-scale segment. When the dictatorship ended, though, foreign investment flowed into Chile in large quantities, and one third of it went into mining.³⁴ As a result, as said, CODELCO currently accounts for one third of total production, while large private mining companies, most of them foreign, account for the other two thirds. Small and medium Chilean producers,³⁵ which previously accounted for almost 7 per cent of total production, are now reduced to less than 2 per cent (COCHILCO 2003).

³² In fact they pay a token royalty, the *patente minera*. For the whole of the country, all charges for *patentes mineras*, both for exploration and for exploitation, amounted to \$18.6 million a year (1997/98). This royalty is so low that unscrupulous traders of these rights acquire mining patents for areas that have no mining use whatsoever, even in the urban area of Santiago. They use these “rights” to hold to ransom the legitimate owners of the surface area who may want to sell or develop the site in question (Riesco 2003).

³³ It is said that when the present legislation was drafted in 1981, one of Pinochet’s ministers argued in favour of establishing a royalty—as sound economic theory dictates—but he was overruled by the finance minister of the time, who favoured “giving up ground rent for the time being” on the grounds that the country was in the midst of a financial crisis and desperate for foreign investment.

³⁴ Total foreign investment in Chile from 1974 up to 2002 amounted to \$51.96 billion, of which \$18.1 billion went into mining. Of that total only \$8.41 billion (\$4.21 billion for mining) flowed in before 1993 (COCHILCO 2003).

³⁵ That is, companies that are *really* small and medium, not the large, mostly foreign, mining companies that have been listed as “medium” for tax-avoidance purposes.

The legislation introduced by the Chilean government on 5 July 2004 recognizes all the above, saying,

These mineral resources possess an intrinsic value, because they may be exploited for a profit. Nevertheless, the state does not receive any compensation for the extraction and sale of such valuable resources that according to the Constitution it owns. Presently the mining contractor takes advantage of non-renewable mining resources as if they were goods with no value at all. This situation is equivalent to a state subsidy in benefit of the owners of these companies (Chilean Government 2004:1 [author's translation]).

Immiserizing Growth

With the sole exception of extreme neoliberalism, ground rent is an important issue in every school of economic thought, from the classics up to the neoclassics. Ground rent stems from the fact that any industry that operates with a scarce factor will, in time and as demand grows, push the price over the normal competitive level and generate surplus profit. That, in turn, will prompt those attracted by surplus profit, who want to enter the market, to pay a rent to the owner of the scarce resource.

If the factor is of variable quality, such as agricultural land (in the classic case analysed by David Ricardo), then the different qualities will generate differential or so-called Ricardian ground rent. If, in addition, the factor is non-renewable or depleting, such as minerals, the fact that its availability will eventually be exhausted generates another kind of intertemporal rent, named Hotelling ground rent, after the US economist who formalized the concept in the 1930s³⁶ (Figueroa 1998; Riesco 2000, 2001a, 2002).

Economic theory also establishes that ground rent should always be charged, otherwise the implicit subsidy will cause an overflow of capital into the economic sectors involved, damaging others. The economist Jagdish Bhagwati analysed the extreme case where such an overflow of investment could generate a global glut in the respective market and cause the price to fall even more than the increase in production, thus generating a decline in overall incomes. He called such a case “immiserizing growth” (Bhagwati 1958).

It seems Chile may, in fact, have proved the accuracy of Bhagwati's immiserizing growth case. In 1995, Chile sold 2.41 million tonnes of pure copper for \$6.43 billion, while in 1999 it sold 4.23 million tonnes of pure copper for only \$5.89 billion, that is, while physical exports increased by 76 per cent, the value of exports declined by 8.4 per cent (see table I.6). The selected period is revealing, because in 1995 the average copper price was rather similar to the mean price of the previous 40 years—around 140 cents³⁷ per pound of copper. World copper demand grew at a faster pace in that period than ever before. In addition, while the rest of the world reduced its production, Chile increased its own output by an amount that exceeded the whole of the increase

³⁶ Hotelling assumed that optimal exploitation of a depleting resource implied equalizing intertemporal net benefits, in present value, for all the periods involved. Such a procedure concludes that the level of optimal exploitation for any given period should always be lower than the one that would result if the eventual depletion were not taken into account; less output would result in excess price and excess profit and, thus, in a new form of ground rent.

³⁷ All references to cents are to US cents. One pound equals 0.454 kilogram.

in world demand in the period. In other words, Chile was solely responsible for the copper market glut and price decline (Caputo 1996; Caputo et al. 2000, 2001).

During the following years, the problem was compounded by global economic recession and increases in Chilean copper output, with the price falling to a historic low of 60 cents per pound by mid-2002. In 2002, Chile exported 4.5 million tonnes and received \$6.28 billion.

At this point, the largest Chilean producers, headed by state-owned CODELCO and BHP Billiton's Escondida, decided to cut production or increase their own stocks. The reaction on the world copper market was instantaneous; the copper price stopped its free-fall and within a few weeks increased by about 10 cents a pound. This action by the largest Chilean producers confirmed what the critics of the prevailing Chilean mining policy had been arguing for years, namely, that Chile was responsible for the world copper market glut and price crash. Even COCHILCO, the Chilean state agency in charge of copper studies and supervision, has recently attributed the increase in prices to the actions of Chilean producers (CENDA 2004a: 25/10/2002). This agency had previously defended the current policy and repeatedly declared that the country was a "price taker" (COCHILCO 2000). This is despite the fact that Chile, with around 34 per cent of global copper production and 40 per cent of exports, plays a larger role in the world copper market than the Organization of the Petroleum Exporting Countries (OPEC) does in relation to petroleum (Caputo 1996; Caputo et al. 2000, 2001).

From a developmental perspective, this matter raises important questions with respect to the fully open and unregulated Chilean development model. The investment flows into copper mining—attracted by the huge subsidy of free access to a scarce resource of high quality—have been so large that this sector alone accounts for one third of total private investment. Over the last three decades, a similar proportion of foreign direct investment has gone to mining. If other economic sectors in a similar situation, such as forestry and fishing, are also considered, the proportion of investment going to natural resource-related economic sectors easily exceeds 50 per cent. These sectors also have high ground rent, and access to them is mostly free.³⁸ As a result, the economic structure of Chile has been seriously biased toward primary exports, with a disproportionate amount of the country's resources oriented toward such sectors.³⁹

³⁸ In the case of forestry, Chile presents important advantages, not least because trees grow almost twice as fast as in the northern hemisphere. Fisheries are of high quality, both in the open sea and in the southern fiords and lakes where fish and seafood farming is flourishing. In the case of forestry, ground rent has, in part, been internalized by the fact that huge extensions of land suitable for forestry are already the private property of large forestry firms, which expand through buying land from small farmers, and which benefit from a state subsidy for reforestation. In the case of open sea fisheries, a sort of ground rent capturing scheme has been in force for some years now, through the introduction by the state of limited capture quotas. The quotas, however, were initially distributed almost for free, but the beneficiaries of the quotas pay a small yearly amount to the state. The established fishing companies also sell the quotas among themselves, which can also be considered a type of ground rent.

³⁹ Farías 2002; Ibáñez and Pizarro 2003; Riesco 2000, 2001a, 2002.

Table I.6: Chile: Selected copper figures

	Copper Exports											%	%
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	variation	variation
												1989-1999	1995-1999
Exports ^(a.)	1,558	1,554	1,728	1,937	1,984	2,082	2,411	2,954	3,297	3,581	4,237	172%	76%
Value of copper exports ^(b.)	4,410	4,152	3,903	4,185	3,447	4,672	6,431	5,744	6,738	5,336	5,889	34%	-8%
Taxation received by the Chilean state													
CODELCO and ENAMI (state-owned) ^(b.)	2,223	1,629	954	963	472	916	1,771	1,043	1,174	374	240	-89%	-86%
Private companies ^(b.)		7	11	141	76	147	168	281	298	122	65		-61%
Total captured by the state ^(b.)	2,223	1,636	965	1,105	548	1,063	1,939	1,324	1,472	496	305	-86%	-84%
% sales	50	39	25	26	16	23	30	23	22	9	5	-90%	-83%
US\$ per tonne of pure copper	1,427	1,053	559	570	276	510	804	448	447	138	72	-95%	-91%
US\$ per pound of pure copper	0.65	0.48	0.25	0.26	0.13	0.23	0.36	0.2	0.2	0.06	0.03	-95%	-91%

Notes:

(a.) In thousand tonnes.

(b.) Million US dollars at 1999 rates.

Source: CENDA (2004b:table 1.6).

Many problems stem from this unbalanced pattern of growth; not least, the relative weakening of other economic sectors comprising higher value-added activities. This phenomenon is also known as the “Dutch disease”, in reference to a similar situation that was identified in the Netherlands during the first stages of the petroleum boom of the 1980s (IIED 2002). However, no damage seems so clear, none so damaging to the whole of the Chilean economy, including of course the copper mining industry itself, as the process of immiserizing growth described above.

The legislation introduced by the Chilean government on 5 July 2004 acknowledges this situation in part:

Not charging for the use of a factor of production will result in addition in an artificial reduction of extraction and treatment costs of mineral products. This artificial reduction in production costs generates incentives for overexploiting mineral deposits, because suppliers will make their decisions regarding their private costs. The establishment of a mining royalty as in this law will correct this situation, making producers internalize the real cost of minerals extracted (Chilean Government 2004:1 [author’s translation]).

Moreover, the problem is not resolved, despite the fact that copper prices have been increasing in recent months.⁴⁰ Quite the contrary; it remains highly relevant. Rational microeconomic analysis of the present situation should conclude that there are still huge incentives for newcomers to enter the Chilean copper industry and for the already established producers to continue a fiercely competitive expansion race. There are no relevant physical barriers preventing newcomers from entering the market or established players from expanding their output. There are plentiful reserves of high-quality minerals, both as recognized reserves already in the property of CODELCO or other established companies, as well as others in pre-exploration or exploration phases. Moreover, there are no royalties or other charges. The most probable outcome, if the present mining policy does not change, is that Chilean copper production will continue to grow at a very fast rate, keeping prices low. In fact, the investment outlook for the next five years shows that, again, one third of the projects are related to mining (CENDA 2004a: 4/08/2003).

Simple microeconomic theory suggests that such a situation would continue until the point is reached when the economic incentive for entering this market is completely dissipated; that is to say, until the price of copper has fallen enough to completely dissipate the ground rent associated with copper production. In addition, Chile already proved that it is capable of busting world copper prices when it flooded the market in just five years.⁴¹ Unless there is a drastic change in Chilean policies, the market outlook for copper is quite dim (Caputo et al. 2000, 2001; Ibáñez and Pizarro 2003; Riesco 2002, 2003).

Many stand to lose from the consequences of this outlook, which would be similar to those experienced during the last decade when employment in mining fell by 19 per

⁴⁰ The copper price recently topped one dollar a pound for the first time since 1997. This has occurred, however, at a time when the US dollar has been losing value.

⁴¹ Between 1995 and 1999, Chilean copper production grew by 1.82 million tons, which was over 16 per cent of overall world copper production in 1995.

cent.⁴² Although large-scale mining employment grew by 25 per cent, this increase was more than offset by a reduction of 75 per cent and 49 per cent in the medium and small mining sectors, respectively (COCHILCO 2003). These segments have virtually been liquidated,⁴³ exacerbating the level of poverty in a sector that was already poor. By 1999, total government revenue from copper had been reduced by 86 per cent when compared to 1989, and by 84 per cent in relation to 1995, with CODELCO's total contributions to the government falling by 89 per cent and 86 per cent, respectively, in the same years. The US dollar contribution to the state per tonne fell from \$1,427 in 1989 and \$804 in 1995 to \$72 per tonne in 1999, that is, 95 per cent and 91 per cent, respectively. The proportion of copper sales captured by the state fell 90 per cent and 83 per cent, respectively, for the same years (see table I.6) (Caputo 2000).

What Should Be Done?

As is well known, states usually charge royalties and employ various mechanisms to capture ground rent associated with their natural resources. Almost every mining country in the world, with the notable exception of Chile, does this. The US and Canadian governments, for example, impose royalties and taxes on mining companies. Norway is frequently cited as a classic example of a small country that has devised flexible and effective mechanisms to capture ground rent associated with its underwater petroleum resources. Norway has used a combination of royalties on overall sales, taxes on profits, auctioning of mining districts, state controls over production, technology, transfer prices and other mechanisms, as well as the creation of a large state company to exploit a significant part of the resources (Figueroa 1998; Riesco 2003). In 2003, South Africa established royalty payments for most of its mining resources, which include an 8 per cent royalty on sales in the case of diamonds and 2 per cent in the case of copper (Degli Innocenti 2003). Peru approved a 3 per cent royalty on copper exports in June 2004 (CENDA 2004a: 24/06/2004).

Several studies have recommended that the Chilean government adopt measures to capture ground rent related to copper.⁴⁴ Such recommendations begin with a royalty on overall sales to capture differential ground rent in relation to the world market and additional measures include tax surcharges on profits to capture differential ground rent within the country. The proposals have also considered auctioning of mining districts, and increased state authority over production levels, transfer prices and refinement in the

⁴² Chilean employment figures in large mining include subcontractors working for mining companies. Subcontracting has become widespread in the copper industry, both state and private. Private mining operations subcontract most of their services and many of the mine production jobs. CODELCO has also reduced its payroll during the last decade through subcontracting.

⁴³ In Andacollo, a small mining town in a region of small miners some 500 kilometres to the north of Santiago, the owner of the local butcher's shop recently told this author that while a decade ago she sold seven animals a week to her customers, she now sells just one: "large companies busted the copper price, that is why", she explained.

⁴⁴ See Caputo 1996; Caputo et al. 2000, 2001; CENDA 2004c, 2004d; Farías 2002; Fazio 1997, 2001; Figueroa 1998; Ibáñez and Pizarro 2003; Lavandero 1999, 2001, 2003; Riesco 2000, 2001a, 2002, 2003).

country.⁴⁵ While royalties and other schemes designed to capture ground rent are important, the Chilean experience indicates that the most effective way in which small states can capture ground rent is to exploit their natural resources by themselves. The state-owned copper corporation CODELCO has, up to now, been the only effective mechanism the Chilean state has devised to capture ground rent from its copper reserves.

CODELCO was created in the early 1970s from the merger of four large US mining companies that were nationalized by the Chilean state in 1971 under Allende. They operated four large mines: Chuquicamata, El Salvador, Andina and El Teniente. Chuquicamata and El Teniente were the two largest mines in the world at the time.

CODELCO has been hugely important as a source of revenue for the Chilean state. During almost two decades, from the early 1970s to 1989, CODELCO was the sole large mining operation in Chile. During that period, it practically doubled its output, surpassing one million tonnes of pure copper a year by the end of the 1980s.

CODELCO costs are higher than the newer, more efficient, mines opened by the large private companies in the 1990s. Nonetheless, over three decades, CODELCO has consistently paid a 10 per cent royalty on sales and a 17 per cent tax surcharge on profits. In addition, it has paid regular taxes and transferred most of the remaining profits to the state.

While the entire private mining industry paid on average \$167 million a year in taxes from 1991 to 2002, CODELCO averaged \$809 million a year in transfers to the government during the same period. It has been mentioned above that the private mining industry currently holds two thirds of the market, while CODELCO maintains only one third (Chilean Senate 2003h).

As argued above, the losses incurred in Chile, which stem from permissive, neoliberal-inspired mining policy, have been huge. Those particularly affected by this problem include the large producers, such as CODELCO, BHP Billiton, and other large producers. In fact, the world's five largest copper mining companies, which have a huge stake in Chile, all stand to lose in the end, if the present situation is not changed.

Why then, the obstinacy of the Chilean authorities, mining companies, mainstream economists, corporate lobbyists, specialized press and others who deny the problem and

⁴⁵ A study commissioned by the Chilean government in 1989, whose results were kept secret until the magazine *7 Días* published them in 2003, concluded that Chile should charge a 5 per cent tax on sales, a generalized royalty and a tax on profits. CENDA and ARCIS have suggested a set of measures that include: (i) generalizing to all private-sector large-scale mining, both the 10 per cent royalty on sales that CODELCO pays to the Chilean armed forces (but redirecting it to the general state treasury) and the 17 per cent tax surcharge on profits CODELCO is also (and exclusively) subject to; (ii) auctioning mining districts both for exploration and for exploitation, according to the world copper demand; (iii) reinforcing state regulatory capacities in relation to output, transfer prices, technologies and proportion of local refinement, among other factors; and (iv) closing the loopholes through which the large mining companies avoid regular taxation, such as limiting their capacity to export profits as interest payments, forcing them to incorporate themselves as SAs and terminating all large mining SCMs (Riesco 2002).

adamantly oppose any changes in the present mining legislation? The answer to this question is not easy or straightforward. Who in Argentina could rationally explain, for example, the support of just about everybody in power, until the crisis in 2002, for neoliberal gurus and recipes that included the one-to-one peso to dollar peg? In Chile, like Argentina, it has proved impossible to “hang the bell on the puma’s neck” as the old Latin American peasant saying goes—until recently, that is. The issue of capturing ground rent from natural resources and charging royalties is now re-emerging on the political stage in Chile.

As the political momentum behind a reform of mining policy grows, it remains to be seen whether the large private mining companies will continue to resist such policy change. Support for reform would be compatible not only with their long-term economic interests, but also with their adherence to the concept of CSR.

As is well known, the historical evolution of CSR—and the regulations that enforce it—formed one of the building blocks of the modern social contract in the advanced industrialized countries. In fact, it is no less than the foundation of the capacity of the modern leading social class to exert its hegemony by consent rather than by force (Utting 2002). The behaviour of even “socially responsible” international corporations in less developed countries, however, leaves much to be desired. Companies claiming to be socially responsible need to direct their concern and resources not only to specific projects associated with environmental protection, education and health, but also to avoid business practices that may be undermining development. Furthermore, it should be expected that they would not oppose, but instead would welcome, efforts by governments of host countries to improve their regulations in order to enforce fully responsible rules of behaviour for all actors in the industries where they operate.

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PART II

“Pay Your Taxes!” Faulty Calculations or Ideological Prejudice?

Gustavo Lagos
and
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Summary/Résumé/Resumen

Summary

This paper analyses the preceding study and one other report by the same author, which compared the financial results of the Corporación Nacional del Cobre de Chile (CODELCO) and Minera Escondida for the period 1998–2002.

Analysing the data contained in the annual reports of both companies, the two reports attempted to demonstrate that Escondida (and its controlling company, BHP Billiton) did not meet their tax obligations in Chile, using a scheme of underbilling sales to smelters in Japan, Germany and Finland to reduce profits in Chile by an amount calculated by Riesco to be between \$789.5 million⁴⁶ and \$1.3 billion, for the period 1998–2002.

These accusations were based on three factors.

- A comparison of the profits arising from revenues for the by-products of each of the companies, with CODELCO's credits being \$144.5 per tonne higher than those of Escondida.
- A comparison between the average price for the concentrate sold—after deducting treatment, refining and shipping costs, and by-products credits—and the average market price for copper cathodes on the London Metal Exchange (LME), which resulted in an “unexplained” difference of \$52.4 per tonne.
- A comparison between the market prices for treatment and refining charges, and those obtained by Escondida, both for contracts and for the spot market, of \$14.5 and \$136.2 per tonne, respectively.

Based on the data presented in Riesco's reports, it is not possible to arrive at the conclusion that Escondida underreported revenues, for the following reasons.

- Revenues from the by-products are not comparable, since CODELCO's figures include revenue corresponding to molybdenum and sulphuric acid, as well as earnings of the company's Engineering Division, none of which applies to Escondida. Furthermore, the fact that each mine produces different by-products, even among the various areas of one mine, is completely ignored.
- When comparing an arithmetical average (LME) with a weighted average (revenue per tonne sold), price volatility alone during the period examined allows for variations of \$300 per tonne, and annual volatility fluctuates between \$125 and \$299 per tonne, figures which are far greater than the allegations of \$52.4. Cases where the LME average and the average selling price are the same would occur only if the price were constant in the period (no volatility present), or if the same tonnage were sold on each day of the relevant period.
- Volatility also explains differences with respect to the market treatment and refining charges, the comparison with contract terms being the only relevant one:

⁴⁶ All references to \$ are to United States (US) dollars.

\$14.5 per tonne. Escondida could not access the spot market, since virtually all of its production is sold through long-term contracts.

In summary, Riesco's reports are rather simplistic, with obvious errors in methodology, resulting in erroneous conclusions.

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Résumé

Ce document analyse l'étude qui précède, ainsi qu'un autre rapport du même auteur, qui comparait les résultats financiers de la Corporación Nacional del Cobre de Chile (CODELCO) et de la Minera Escondida pour la période 1998–2002.

En analysant les données contenues dans les rapports annuels des deux sociétés, Manuel Riesco a tenté de démontrer, dans ses deux rapports, que la Escondida (et la société qui en a le contrôle, BHP Billiton) ne remplissaient pas leurs obligations fiscales au Chili et usaient dans ce but d'un stratagème consistant à sous-facturer les ventes aux fonderies du Japon, d'Allemagne et de Finlande pour réduire leurs bénéfices au Chili d'un montant se situant, selon les calculs de Manuel Riesco, entre 789,5 millions de dollars⁴⁷ et 1,3 milliards de dollars, pour la période 1998–2002.

Ces accusations reposaient sur trois facteurs.

- Une comparaison des bénéfices réalisés sur les recettes provenant des sous-produits de chacune des sociétés, qui montre pour la CODELCO un revenu dépassant de 144,5 dollars par tonne celui de la Escondida.
- Une comparaison entre le prix moyen du concentré vendu—après déduction des frais de traitement, de raffinage et de transport, et des revenus provenant des sous-produits—et le cours marchand moyen des cathodes de cuivre à la Bourse des métaux de Londres (LME), qui donnait une différence “inexpliquée” de 52,4 dollars par tonne.
- Une comparaison entre les prix de traitement et de raffinage pratiqués sur le marché, et les prix obtenus par Escondida, à la fois pour les contrats et le marché au comptant, qui sont respectivement de 14,5 et de 136,2 dollars par tonne.

Les données présentées dans les rapports de Manuel Riesco ne permettent pas de conclure qu'Escondida a sous-déclaré ses revenus, et ce pour les raisons suivantes.

- Les recettes provenant des sous-produits ne sont pas comparables, car dans les chiffres de la CODELCO sont compris des recettes provenant de la production de molybdène et d'acide sulfurique, ainsi que les gains de la division Ingénierie de la société, qui ne s'appliquent pas dans le cas de la Escondida. De plus, l'étude ne

⁴⁷ Par dollar, on entend partout ici le dollar des Etats-Unis (E.-U.).

- tient aucun compte du fait que les sous-produits diffèrent d'une mine à l'autre et même d'une zone à l'autre dans une même mine.
- Lorsqu'on compare une moyenne arithmétique (LME) avec une moyenne pondérée (recettes par tonne vendue), la volatilité du prix pendant la période examinée peut à elle seule donner lieu à des variations de 300 dollars par tonne, et la volatilité annuelle fluctue entre 125 et 299 dollars la tonne, chiffres bien supérieurs à celui allégué de 52,4 dollars. La moyenne arithmétique LME et le prix de vente moyen ne pourraient être les mêmes que si le prix était constant pendant la période (aucune volatilité) ou si le tonnage vendu était le même chaque jour de la période considérée.
 - La volatilité explique aussi les différences par rapport aux prix de traitement et de raffinage pratiqués sur le marché, la comparaison avec les termes du contrat étant la seule pertinente: 14,5 dollars par tonne. Escondida ne pourrait pas accéder au marché au comptant, puisque pratiquement toute sa production est vendue en exécution de contrats à long terme.

En résumé, les rapports de Manuel Riesco sont assez simplistes, avec des erreurs évidentes de méthodologie, qui conduisent à des conclusions erronées.

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Resumen

En el presente documento se analizan el estudio anterior y un segundo informe del mismo autor, en el cual se comparan los resultados financieros de la Corporación Nacional del Cobre de Chile (CODELCO) y Minera Escondida para el período 1998–2002.

Mediante un análisis de los datos contenidos en los informes anuales de ambas empresas, los dos documentos pretenden demostrar que Escondida (y la compañía con una participación mayoritaria en la misma, BHP Billiton) no cumplieron con sus obligaciones tributarias en Chile, para lo cual utilizaron un esquema de subfacturación de ventas a fundidoras del Japón, Alemania y Finlandia a fin de reducir las ganancias generadas en Chile en una cantidad que Riesco calcula entre \$789.5 millones⁴⁸ y \$1.3 mil millones para el período 1998–2002.

Estas acusaciones se basan en tres factores:

- Una comparación de las ganancias resultantes de los ingresos por concepto de los subproductos de cada una de las compañías, con los créditos de CODELCO ubicados en \$144.5 por tonelada por encima de los de Escondida.
- Una comparación entre el precio promedio del concentrado vendido—luego de haber deducido los costos de tratamiento, refinación y transporte y los créditos por los subproductos—y el precio promedio de mercado de los cátodos de cobre en la

⁴⁸ Todas las referencias a dólares son dólares de los Estados Unidos.

- Bolsa de Metales de Londres (LME), que arrojó una diferencia “no explicada” de \$52.4 por tonelada.
- Una comparación entre los precios de mercado para los cargos por concepto de tratamiento y refinación y los precios obtenidos por Escondida, tanto para los contratos como para el mercado de entrega inmediata, de \$14.5 y \$136.2 por tonelada, respectivamente.

A partir de los datos presentados en los informes de Riesco, no es posible llegar a la conclusión de que Escondida hizo una subdeclaración de renta, por las siguientes razones:

- Los ingresos provenientes de los subproductos no pueden compararse, dado que las cifras de CODELCO incluyen los ingresos correspondientes al molibdeno y al ácido sulfúrico, así como las utilidades de la División de Ingeniería de la compañía, ninguno de los cuales se aplica a Escondida. Más aún, se obvia totalmente el hecho de que cada mina genera subproductos diferentes, incluso entre las distintas áreas de una misma mina.
- Al comparar el promedio aritmético (LME) con un promedio ponderado (ingreso por tonelada vendida), la volatilidad del precio durante el período examinado permite variaciones de \$300 por tonelada, y la volatilidad anual fluctúa entre \$125 y \$299 por tonelada, cifras que son muy superiores a los supuestos \$52.4. Los casos en los que el promedio LME y el precio de venta promedio son iguales se presentarían únicamente si el precio fuese constante en el período (no hay volatilidad) o si se vendiera el mismo tonelaje cada día del período en cuestión.
- La volatilidad explica también las diferencias con respecto a los cargos por concepto de tratamiento y refinación, con la comparación con los términos contractuales como la única comparación pertinente: \$14.5 por tonelada. Escondida no podía tener acceso al mercado de entrega inmediata, dado que virtualmente toda su producción se vende mediante contratos a largo plazo.

En resumen, los informes de Riesco son simplistas y contienen errores metodológicos obvios, por lo que sus conclusiones son erróneas.

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Introduction

In January 2004, the Centro de Estudios Nacionales de Desarrollo Alternativo (CENDA) released a study, titled *Análisis de Resultados Financieros de la Industria del Cobre en Chile: Minera Escondida y Codelco, 1998–2002* (Riesco 2004a), which, as the title implies, is a brief analysis of the financial statements of the two principal copper mining companies currently operating in Chile, and based on published annual reports and financial statements. A second version of the same study appeared in March of 2004 (Riesco 2004b).

In a letter⁴⁹ dated 23 January 2004, addressed to the Honorable Senator Mr. Jorge Lavandero Illanes, president of the Senate Mining Commission that presided over the above-mentioned report, Manuel Riesco, the vice-president of CENDA and author of the report, after commenting positively on CODELCO's and Escondida's management in issues such as information transparency, social responsibility, tax payment and other factors, concludes that “these companies constitute a model for the rest of the copper industry and indeed for all other companies in general” (Riesco: 2004a:3 [authors' translation]).

However, immediately thereafter Riesco commences a series of statements regarding a supposed undervaluation of Escondida's revenue, which had enabled it to pay fewer taxes than it should have, and gives figures that fluctuate from 75 per cent (in the letter dated 23 January 2004) to others that range between 46 per cent and 76 per cent (in a letter dated 16 March 2004⁵⁰). Even though he is careful not to directly accuse the company of having committed fraud, by means of insinuation he even goes so far as to say that Escondida might have used these practices to favour certain smelters and refineries who had participated in the company's initial financing.⁵¹

Even though the report refers directly to the behaviour of Escondida, upon closer analysis it is evident that the main objective is the tax behaviour of all private mining companies in general, since all of these, right from the initial introductory phrase (“It is well known that private companies operating in the Chilean copper mining industry, in general, do not pay taxes.” [Riesco 2004b:6 (authors' translation)]) are presented as companies that do not comply with their obligations to the country.

Moreover, in the body of the report there is a phrase that clearly points out the central thesis, which is the following:

However, and notwithstanding the above, this study seems to have found evidence, or at least sufficient elements, regarding the fact that even a company that appears to be a model

⁴⁹ The letter is reproduced in Riesco 2004a:2–4. The quoted phrase does not appear in the letter dated 16 March 2004 (Riesco 2004b).

⁵⁰ The letter is reproduced in Riesco 2004b:2–5.

⁵¹ “The above figures suggest that perhaps Escondida might have found a very subtle but nevertheless very substantial method to express this gratitude toward these special clients, for an entire decade. The only problem in this regard is that apparently the state of Chile seems to have inadvertently(?) or involuntarily(?) contributed very generously to expressing this gratitude” (Riesco 2004a:4 [authors' translation]).

of corporate social responsibility [CSR], such as Minera Escondida of BHP Billiton, could have likewise engaged in business practices that result in a significant underdeclaration of its profits and taxes (Riesco 2004b:8 [authors' translation]).

Based on the same data presented in the report *Análisis de Resultados Financieros de la Industria del Cobre en Chile: Minera Escondida y Codelco, 1998–2002*, a second document was produced, titled *Pay Your Taxes! Corporate Social Responsibility and the Mining Industry in Chile*, written by the same CENDA entity, and signed by the same Mr. Riesco. The front cover of that report claims that it is a “Draft paper prepared for the United Nations Research Institute for Social Development (UNRISD), within the research area Business Responsibility for Sustainable Development”, even though it explicitly states that “publication does not constitute endorsement by UNRISD” (Riesco 2004f). In this regard, it is interesting to note how Riesco, in an opinion column written for the electronic newspaper *El Mostrador*, indirectly alludes to the aura of the United Nations.⁵² In this draft paper, which is far more extensive than the previous one, he refers to issues related to the historical development of mining in Chile, the foundations of CSR in the mining industry, the tax behaviour of mining companies, and the tax treatment of natural resources, particularly the imposition of royalties on mining exploitation.

One central section of the paper is related to the case of BHP Billiton, a company which holds 57.5 per cent ownership of Escondida and controls its administration, and which is presented as “a CSR world leader in the mining industry”, only to state in the very next phrases: “However, even in the latter case [referring to BHP Billiton], this paper has found evidence that may question certain practices regarding profit reporting and taxation” (Riesco 2004f:8).

The Case in Numbers

On several occasions, in both reports, it is stated that Escondida “could [always using the convenient conditional] have been engaging in business practices that result in a significant underdeclaration of its profits and taxes” (Riesco 2004b:8, 2004e:4). The principal attention-getter in this regard is that, according to the analyses carried out by CENDA, Escondida’s statements of account show before-tax results that are similar to those of CODELCO, when expressed per tonne of extracted copper.

And just what are the causes which, according to CENDA’s analysis, allow for the final results to be of the same magnitude

... if it is considered that CODELCO operates mines that are nearly 100 years old, and maintains a heavy infrastructure of labour and administrative costs, while Escondida operates the best and most modern mining operation in the world, on the best copper ore deposit, and with the lowest unit costs of the entire industry worldwide (Riesco 2004b:8 [authors' translation])?

⁵² “Finally, they also seem to export profits by means of transfer prices with their subsidiaries, without paying any taxes. A study *carried out by Cenda for the United Nations* has shown how this mechanism seems to have been used even by Minera Escondida, the only mining company that has behaved well, in terms of not abusing the evasion mechanisms mentioned before” (emphasis added) (Riesco 2004c:2).

A good summary of the reasons why CENDA believes that there could be underbilling in Escondida's revenue is presented in a letter sent to the Honorable Senator Lavandero, in relation to a discussion with the Comisión Chilena del Cobre (COCHILCO) personnel on the issue, and to a response by the minister of mining on these issues, whose text we have not seen, but which apparently forced a change in certain aspects of January's version to arrive at March's more elaborate version, and it is the following (Riesco 2004d [author's translation]).

- These [the differences in revenue] are mainly due to the following reasons.
 - Escondida has sold copper principally in the form of concentrate, for which it has obtained a price which is very much lower than that obtained by CODELCO, which sells its copper in the form of cathodes. While CODELCO sells its copper at practically the same prices as the London Metal Exchange [LME], between 1998 and 2002 Escondida sold its copper at a price that was, on average, inferior to the LME by \$394.9⁵³ per tonne of pure copper sold.
 - Escondida has obtained revenue for the by-products that are included in the product, such as gold, silver and others, at less than one third of the prices obtained by CODELCO for their by-products, per tonne of copper sold. In fact, Escondida has accepted credits for by-products amounting to \$47.5 per tonne of copper, while CODELCO obtained \$162 per tonne of copper produced for the sale of its by-products.
- The refining costs reported by Escondida were \$327.4 per tonne sold, on average, during the period studied. Transportation costs reported by Escondida were \$62.7 per tonne sold, on average, for the same period. And the credits for precious metals and other by-products obtained by Escondida, were \$47.5 per tonne sold. If the costs for treatment and transport are added, and the credits for precious metals are subtracted, the result is a figure of \$342.6 per tonne, which is less than the price difference detected between Escondida and the LME. The price difference that remains unexplained, even after considering these factors, is \$52.4 per tonne of copper, on average, between 1998 and 2002 (see table II.1).
- Escondida has paid treatment costs that are higher than those reported by the company itself as being the going market rates during the indicated period. The treatment costs paid by Escondida, as mentioned previously, were \$327.4 per tonne sold, on average, between 1998 and 2002. The market prices reported by the company itself averaged \$312.9 and \$191.2 per tonne for contract sales and spot sales, respectively, for the same years. In other words, Escondida paid costs that were higher than the ruling market rates for contracts⁵⁴, and much higher than the ruling spot rates. The price differences detected here range between \$14.5 and \$136.2 per tonne, on average, over the period studied.

⁵³ All references to \$ are to United States (US) dollars.

⁵⁴ Escondida's charges were significantly higher than those reigning in the market for contracts in 1998 and 2002; they were similar to market charges in 1999, and slightly lower in 2000 and 2001. This gives an average that is higher than the market value for contracts. Likewise, Escondida's charges are higher than those of the spot market in all of the years, and almost three times higher in 2002.

Table II.1: Minera Escondida: Differences in transfer prices of copper and by-products, refining and shipping costs, and impact on income and taxation
US\$/tonne of payable copper sold ^{(a.) (b.)(c.)}

Items	1998	1999	2000	2001	2002	1998–2002 (average)
Overall copper selling price difference: Escondida (minus)	(444.2)	(398.5)	(377.8)	(400.0)	(354.2)	(394.9)
Refining cost	450.9	334.2	304.5	268.0	279.4	327.4
Shipping costs	63.2	60.1	68.1	60.9	61.1	62.7
By-products discount	(50.2)	(49.8)	(41.8)	(41.4)	(54.4)	(47.5)
Net selling price difference	(19.6)	53.9	47.0	112.6	68.0	52.4
Refining costs, Escondida	450.9	334.2	304.5	268.0	279.4	327.4
Market refining prices, contracts	367.5	334.8	324.9	288.9	248.5	312.9
Market refining prices, spot	216.2	223.2	243.7	190.0	82.8	191.2
Refining charges differences: Escondida (minus) contracts	83.4	(0.5)	(20.5)	(20.9)	30.8	14.5
Refining charges differences: Escondida (minus) spot	234.7	111.1	60.8	77.9	196.5	136.2
By-products discount, Escondida	50.2	49.8	41.8	41.4	54.4	47.5
CODELCO by-products revenues	192.3	167.3	185.6	166.4	98.3	162.0
By-products revenue difference: CODELCO (minus) Escondida	142.0	117.6	143.9	125.0	44.0	114.5
Net selling price difference	(19.6)	53.9	47.0	112.6	68.0	52.4
Refining charges differences: Escondida (minus) contracts	83.4	(0.5)	(20.5)	(20.9)	30.8	14.5
Refining charges differences: Escondida (minus) spot	234.7	111.1	60.8	77.9	196.5	136.2
By-product revenue difference: CODELCO (minus) Escondida	142.0	117.6	143.9	125.0	44.0	114.5
Total difference A (contract)	205.8	170.9	170.4	216.7	142.8	181.3
Total difference B (spot)	357.1	282.5	251.6	315.5	308.5	303.1
Estimated total revenue losses due to: (thousand US dollars)						
Net selling price difference	(18,050)	51,619	43,055	89,441	51,561	43,525
Refining charges differences: Escondida (minus) contracts	76,657	(510)	(18,746)	(16,599)	23,370	12,834
Refining charges differences: Escondida (minus) spot	215,721	106,455	55,714	61,876	148,958	117,745
By-product revenue difference: CODELCO (minus) Escondida	130,530	112,686	131,876	99,259	33,339	101,538
Total difference A (contract)	189,137	163,795	156,185	172,101	108,270	157,898
Total difference B (spot)	328,202	270,760	230,644	250,576	233,858	262,808
Estimated impact on pre-tax revenues (%) (c.)						
Net selling price difference	-4%	19%	8%	37%	30%	13%
Refining charges differences: Escondida (minus) contracts	16%	0%	-3%	-7%	13%	4%
Refining charges differences: Escondida (minus) spot	44%	40%	10%	26%	86%	34%
By-product revenue difference: CODELCO (minus) Escondida	26%	43%	24%	41%	19%	30%
Total difference A (contract)	38%	62%	29%	71%	62%	46%
Total difference B (spot)	66%	102%	42%	104%	135%	76%

Notes: (a.) Escondida includes Soc. Contractual Minera Escondida. CODELCO includes its proportion of production of El Abra.

(b) All prices and costs in this table, except where indicated, are expressed as averages per total tonne of payable copper sold by Escondida, including both concentrates and cathodes. That means they have been adjusted regarding the proportion of copper sold as concentrates, and the copper content in concentrates, as informed by Escondida for each year.

(c) The percentages in the following six lines are calculated dividing the monetary figures in the above six lines by the pre-tax earnings of Escondida for each year from table I.2. Percentages in the final “average” column are calculated from the average monetary figures above, in that same column.

Sources: Calculations in this table are based on table I.2, and data from CENDA (2004b:table 1.5).

- The credits for by-products obtained by Escondida were \$47.5 per tonne, less than one third of the \$162 per tonne that was obtained by CODELCO for the sale of its by-products, on average, during the study period. The price difference in this case is \$114.5 per tonne, on average.
- If all three factors are combined, \$52.4 from the unexplained difference, \$114.5 from lower price of the by-products, and a range of between \$14.5 and \$136.2 per tonne in costs that are higher than market, the result is a difference in the range of \$181.3 to \$303.1 per tonne. In other words, if Escondida had sold at the ruling LME prices, minus prices that fall in the normal market range for treatment and transport, plus credit for by-products similar to that obtained by CODELCO, then Escondida would have obtained higher prices within the indicated range.
- Taking the above figures, and multiplying them by the 869,242 tonnes per year produced by Escondida, on average, between 1998 and 2002, produces a figure for lower revenue of between \$157.9 million and \$262.8 million per year for the period. These figures are equivalent to a range of 46 per cent to 76 per cent of the pre-tax profits declared by Escondida, which were \$344 million, on average, for the same period. The impact of this factor on the declared income is similar. In other words, without varying the tax rates, Escondida could have paid the Chilean State between 46 per cent and 76 per cent more in taxes, approximately, if it had managed its sales policies for copper and copper by-products in the same way as CODELCO did in the period between 1998 and 2002.

Therefore, to conclude, we would like to reiterate that the CENDA case is built around three factors:

- an “unexplained” difference of \$52.4 per tonne between the average LME price for cathodes, and the costs of refining, freight, and the credit for by-products recognized by Escondida;
- a second difference, totalling \$14.5 per tonne or \$136.2 per tonne, between the price paid for treatment and refining charges, and, respectively, the average price of these costs seen on the contracts market, and the spot market; and lastly
- the difference of \$114.5 per tonne of copper between credits for by-products obtained by CODELCO, and those obtained by Escondida.

According to the CENDA study, these three factors explain a reduction in revenue of somewhere between \$157.9 million and \$262.8 million per year. In other words, Escondida is alleged to have undervalued its profits between the years 1998 and 2002 by an amount of between \$789.5 million and \$1.3 billion, with the resulting damage to the tax coffers supposedly ranging between \$276.3 million and \$460 million.⁵⁵

A Technical Analysis of the Figures

For the purposes of explanation, we shall rearrange the unit explanatory factors, sorted from highest impact to lowest, as follows:

⁵⁵ If this supposed undeclared revenue were to be considered as profit withdrawal, then it would be subject to taxation at the rate of 35 per cent under Chilean tax laws.

Factors	Contracts case (\$/tonne)	Spot case (\$/tonne)
By-products	114.5	114.5
Unexplained difference	52.4	52.4
TC/RC* market price	14.5	136.2
Total	181.4	303.1

* Treatment and refining charges.

By-Products

The first issue of interest to be studied is the prices paid to CODELCO and Escondida for their by-products. For the case of CODELCO, the figures used in the paper (Riesco 2004f) correspond to those for sales appearing in the “Income by sale of by-products” breakdown.

A more detailed analysis, which was not performed by CENDA, according to the information contained in the selfsame annual reports [CODELCO *Memoria Anual y Balance* 1999, 2000, 2001, 2002, 2003], shows that these figures include revenue related to the sale of molybdenum, doré metal (an alloy that contains both gold and silver), sulphuric acid sold to third parties, revenue from the Engineering Division, and other minor items that are not detailed. Within the text of the annual reports, only the contribution of molybdenum and the Engineering Division are given explicitly, so by simple mathematics, the difference is obviously the revenue from other by-products.

	1998	1999	2000	2001	2002
Molybdenum	138.000	130.000	131.000	122.000	151.000
Engineering	31.267	26.007	23.226	23.575	22.873
Others (gold, silver, sulphuric acid, etc.)*	119.249	114.267	145.093	137.170	-13.573
Total	288.516	270.274	299.319	282.745	160.300

Source: CODELCO 1999, 2000, 2001, 2002, 2003.

*Calculated by subtraction: Total minus (Molybdenum plus Engineering)

Naturally, these data allow one to clearly see that the income obtained by CODELCO for its by-products is simply not comparable with that income reported by Escondida, since Escondida does not even have any molybdenum or sulphuric acid among its by-products, and least of all does it earn any revenue from an Engineering Division! Similarly, Escondida does not have any metal treatment plants that produce doré metal, which is, indeed, produced by CODELCO, with the resulting greater added value. There is only a bonus corresponding to the precious metals contained in its concentrate, which place it as a gold and silver producer.

In addition, it is totally unreasonable to claim, as does Riesco, that “it does not seem plausible that CODELCO’s ore, located in different parts of the country, can contain by-products that are three times more valuable than those of Escondida” (Riesco 2004e:3 [authors’ translation]), which apparently is trying to suggest that every mine in Chile has exactly the same levels of by-products.

In reality, each mine has very different ore compositions. In nature, copper is found in various different types of mineralogical constructions, such as sulfide ore and oxidized ore, and in addition the ore grade differs greatly from one mine to another, even to the point where it very often varies at different locations within the same mine—reason for which all mining companies try to optimize the operation of those deposits due to the concentration variability of copper, its by-products, and also impurities (materials that attract penalties, such as arsenic, lead, zinc and antimony, etc.).

Some ore deposits in Chile do include molybdenum among their by-products, and among these are Chuquicamata, Los Pelambres, El Teniente and Compañía Minera Disputada de Las Condes, which has allowed Chile to become the second largest producer of molybdenum in the world. This mineral is used in the steel industry and is subject to large price fluctuations, such that for some years a very significant part of CODELCO's income comes from molybdenum. For example, 1995 can be highlighted, when the average price of molybdenum was \$17 per kilogram, and this revenue combined with the sale of electricity by the Tocopilla Division, elevated revenue from by-products to 14.7 per cent of total company revenue. In contrast, in 2002, by-products accounted for barely 4.6 per cent of total revenue.

In relation to this point, it is interesting to compare the production levels of CODELCO, Escondida, Los Pelambres and El Abra (Phelps Dodge [51 per cent] and CODELCO [49 per cent]) for 2002. The various ore characteristics of each company can be clearly seen in the following table.

Table II.4: Ore characteristics, 2002				
	CODELCO	Minera Escondida	Los Pelambres	El Abra
Copper (tonnes of fine)	1,519,693	757,960	335,533	225,231
Gold (kilograms of fine)	4,242	4,719	711	0
Silver (tonnes of fine)	257,242	111,272	34,046	0
Molybdenum (tonnes of fine)	19,902	0	7,848	0

Source: Consejo Minero 2002.

Upon analysing these figures, could any mining student somehow suggest that the responsible stakeholders in management at the El Abra mine, are simply not bothering about the by-products that, according to CENDA, must necessarily exist in their ore?

Unexplained Differences between the LME Price and the Concentrate Selling Price⁵⁶

In relation to this issue, the problem with CENDA's analysis is of a methodological nature. In using the information on the price of copper cathodes on the LME, and comparing it with the prices obtained in the revenue from Escondida's sales of concentrate, a *simple* average, the arithmetical average of the copper price daily quotations in a determined period, is being compared with a *weighted* average, in this case the price of copper at which a specific concentrate shipment was sold, for the volume of that shipment alone.

Since the LME price varies on a day-to-day basis, and the volumes sold are not evenly spread across the period analysed, these figures simply cannot coincide. When could they be the same? Only if the price remains constant, or if the same amount of product is sold on each day of the period—both cases do not correspond to reality.

The correct way of analysing the differences detected here is to consider price volatility, that is, the difference existing between the price of copper each day, and the average price over a given period. The greater the difference observed between the daily price and its average, the greater the volatility.

Figure II.1: LME copper price behaviour, 1998–2002

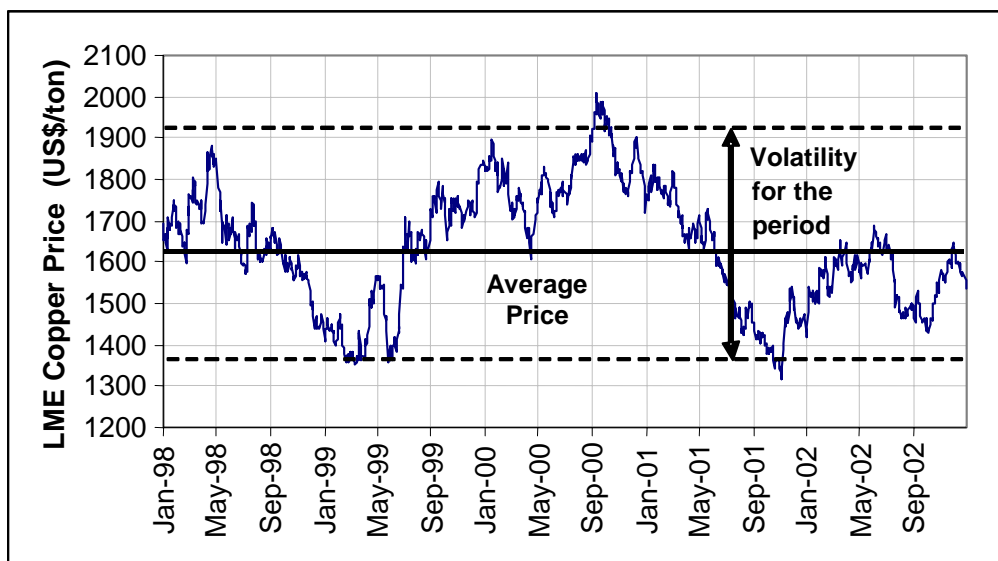


Figure II.1 shows the behaviour of the copper price in the period 1998–2002, and by applying statistical analysis it can be seen that the standard deviation, which is commonly used as a price volatility measure, is \$146 per tonne. If the same analysis is performed year by year, the corresponding values are \$91, \$149, \$77, \$146 and \$62, respectively. For non-specialists this implies that, with 95 per cent probability, the price of copper

⁵⁶ We acknowledge Juan Ignacio Guzmán's support in the statistical calculations.

during the period analysed fluctuated around its average by an amount of \$292 per tonne (twice the standard deviation). In the above figure, the solid line and the dotted lines show, respectively, the average price and the copper price range or the volatility, for the 1998–2002 period. From this figure it is obvious that most of the time the copper price was very different from the average price for the period. In fact, a simple visual appreciation of this figure permits determining those few moments when the copper price was actually identical to the average.

If a mine were to take its production for the entire 1998–2002 period, and divide it into exactly equal parts to be sold on each day of the period, then the average selling price would be exactly the same as the average copper price for those years. What would we then expect for a mine that sells its production heterogeneously at different times? That the average selling price will be different from the average price for the period. How different can the average selling price be in relation to the average of the metal's spot quotation? In theory, the average selling price could be any point within the range given by the volatility.

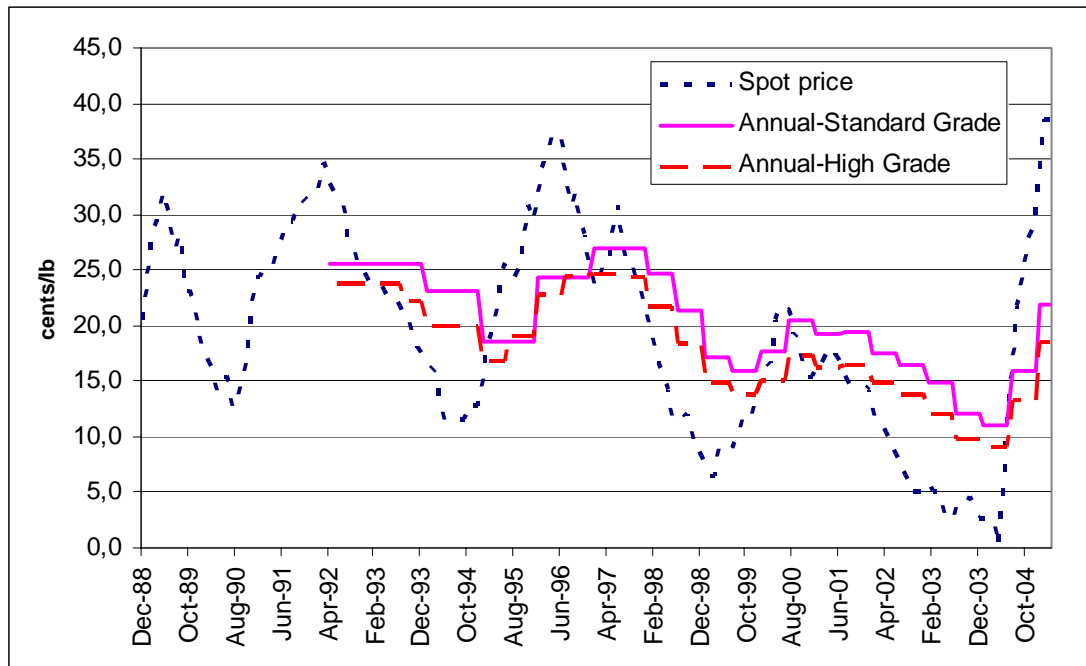
Therefore, the difference of \$52.4 per tonne mentioned in Riesco's study is well within the range that can be explained by volatility. In fact, any difference (positive or negative) of up to 292 per tonne can be attributed to the high volatility of the copper price.

If we add to this phenomenon that the unexplained difference corresponds to a calculated comparison between the weighted average of the tonnage of concentrate and the LME copper price, on one hand, less the average treatment and refining discounts, less the average transportation expenses, plus the credits for by-products obtained in the operations of the company, all non-linear functions, it is statistically impossible to not find differences in the amounts presented.

Differences in the Treatment and Refining Charges

Before analysing this problem, the peculiarities of the concentrate market should first be understood. First, the clients of those mining companies who sell concentrate are smelters and refiners that buy copper, and they usually buy at market price (LME price) from which they subtract a certain amount in order to reflect the treatment and refining charges (TC/RCs) for processing the metal. These transactions are carried out through contracts, which can be classified either as "regular contracts", or as "occasional sales" or "spot sales" contracts. According to several studies, more than 80 per cent of these companies operate with regular contracts, which provide greater market security, and these contracts take into account an annual renegotiation of the TC/RC (*Mining Journal* 1998:324). Prices on both markets change as a function of the relative scarcity of concentrate. If there is an abundance of concentrate available, the spot price of the TC/RC is high; when there is no abundance, the price decreases.

Figure II.2: Historic data for annual contracts and spot price



Source: Commodity Research Unit, London, 2004.

A second issue, which is common in the Pacific rim, is that the contracts include a “copper price participation” clause, in which a certain percentage of the price (typically 10 per cent) is credited to the smelter if the copper price increases above a certain level (90 cents per pound)⁵⁷ but reverts to the mining company when prices fall below that level (*Mining Journal* 1998:324).

Third, it is common for mining operations to obtain financing for their projects through special loans that are granted with interest rates that are lower than those of the financial markets, and without requiring any guarantee other than the flows associated with the project itself (a system known as project finance), but subject to a clause that obliges the seller to sell between 60 per cent and 70 per cent of the total estimated concentrate production to certain clients, under the system of long-term regular contracts. This practice is common in countries such as Japan (Jexim), Canada (Export Development Corporation), Finland (Finnvera) and Germany (Kreditanstalt für Wiederaufbau [KfW]), where state or semi-state banks are willing to finance these mining projects in order to assist the smelters in their countries to ensure a constant supply of concentrate. This is the case with projects in Chile, Indonesia, Canada, Argentina and Peru.

These concepts explain the policy followed by Escondida with regard to the sale of its concentrate. A significant part of Escondida’s production (85 per cent) was subject to long-term contracts, which ended in 2002, with smelters who participated in the original financing of the project.

⁵⁷ All references to cents are to US cents. One pound equals 0.454 kilogram.

However, as with any other mining company, Escondida also wanted to place part of its production on the spot market, to take advantage of the better prices. To do this, in the same manner as other producers, Escondida has contracts with tonnage options of +/-10 per cent that can be exercised in whatever way turns out to be most convenient: positive if the spot market is slow, and negative if the spot market is attractive.

Notwithstanding this practice, according to company management, there were no important operations on the spot market during this period (i.e., 1998–2002) that could have taken advantage of the scarcity effect. This was due to two reasons: first, because additional tonnage was sold in order to place the expected production of Phase IV, which came online two years later than planned (in 2002 instead of 2000), and second, because in November 2001, Escondida cut back its annual production by 10 per cent, which limited ever further the availability of tonnage which could be sold on the spot market.⁵⁸

Also, Escondida's contracts include a price participation clause, which improved the value obtained for the TC/RC (between 2 and 3 cents per pound), when the price of copper was below 90 cents per pound.

Considering all of the above information, almost all of the production was sold under the regular contract system. In addition, since Escondida is the world's largest supplier of concentrate, the market price is built around the negotiations that it undertakes with smelters when defining the terms of its long-term contracts. Thus the difference between the average prices and those obtained by Escondida is minimum, since it is practically the industry average.

The CENDA report (Riesco 2004f) emphasizes the difference of \$14.5 per tonne, but using the above reasoning regarding the average price and volatility, this difference between Escondida's annual average selling price (a weighted average according to the volume sold) and the annual average TC/RC quotation is very easily justified. In this way, during three years of the five analysed, Escondida "wins", and in the other three it "loses", as compared to the contracts' average price.

Regarding the differences on the spot market, these are simply not applicable since the company was not able to take advantage of the good conditions existing on that market. In order to have been able to sell on the spot market, Escondida would have had to break its long-term contracts, which is simply unthinkable in the world market.

In summary, the accusation that "Escondida accepted charges greater than those current in the market for contracts and much greater than those current for 'spot' sales" (Riesco 2004e:4 [authors' translation])⁵⁹ is not supported by any statistical, economic or contractual considerations.

⁵⁸ This fact is very much highlighted in both of the CENDA reports (Riesco 2004a/2004f) as being highly favourable for copper prices.

⁵⁹ "Escondida's charges were significantly higher than those reigning in the market for contracts in 1998 and 2002; they were similar to market charges in 1999, and slightly lower in 2000 and 2001. This gives an

It must be emphasized that Escondida, as a subsidiary of another company (BHP Billiton) that is listed in the New York, Melbourne and London Stock Exchanges, is subject to compliance with a set of auditing practices, whose point of reference is the Securities and Exchange Commission (SEC) of the United States.

The Vision of Authority

One of the greatest controversies in the world of multinational companies is that of transfer prices and their role as a mechanism for moving profits from countries where the relevant revenue is generated, to countries with lower taxation. Although it is not mentioned explicitly, this element is present in the reports analysed, and therefore it is important to point out the various controls and regulations that exist in Chile in this regard, which have improved with time.

It is interesting to note that, according to COCHILCO (the entity in charge of supervising and inspecting full and correct compliance with laws, regulations and norms regarding procedures that are specifically applicable to the mining sector and to the relevant companies, both private and public), “export of copper and its sub-products is the most rigorously controlled of all Chilean exports” (COCHILCO 2004).

Various reasons can be cited in support of this statement, among which the most important are that these (metals exports) are governed by their (the products’) international prices, which are widely known; and that this is the only Chilean export whose contracts, including those signed overseas involving national production, are reviewed by a specialized entity such as COCHILCO, which also has the parameter of the contractual terms obtained by the production of the state-owned company CODELCO, as well as all the terms obtained by all the other private companies that export concentrate (which makes it difficult to suppose collusion or implicit agreements between them).

It is impressive to observe the large amount of information that is reviewed by this entity: product quantity and composition, buyer-destination, the existence of awards or penalties for treatment depending on whether the subject is cathodes or unrefined copper products, as well as deductions and/or penalties, as applicable. To the above, it should be added that there are “firm sales” (at a price that is previously known) and also “conditional sales” (where the price is determined after the export operation has already taken place). Only subsequently can any contractual clause that contravenes the market conditions come to light, and in the opinion of COCHILCO, “experience has shown that exporters, when facing observations from this Commission to their contracts or sales agreements, accept the observations that, in our opinion, could damage the interests of the country, and they carry out the required modifications” (authors’ translation) (COCHILCO 2004).

average that is higher than the market value for contracts. Likewise, Escondida’s charges are higher than those of the spot market in all of the years, and almost three times higher in 2002” (Riesco 2004e:4 [authors’ translation]).

In addition, the Servicio Nacional de Aduanas (National Customs Service) supervises the physical export of copper and its by-products, checking the quantity and contents, and by means of physical inspection, verifying that the product, quality, grade and content of other metals, all correspond to those that were declared by the exporter. This entity passes on the information about the transaction to COCHILCO, so that it can check that it is consistent with the contract and with market prices.

Lastly, a National Customs Service resolution (No. 2757) has established that it is compulsory to certify the weight and quality of all copper concentrates leaving national ports, and a range of maximum acceptable variations was established regarding the content levels present in concentrate upon arrival at destination. If the levels in an operation fall outside of this range, the National Customs Service adjusts the figures regarding the contents actually present in the concentrate and reports this to the Internal Revenue Service (IRS) (Chilean SII), which takes the relevant action to correct and fine the violating party.

It is interesting to note that this resolution was the result of a joint effort by the Ministerio de Minería (Ministry of Mining), the National Customs Service, the Internal Revenue Service and COCHILCO, with technical collaboration by the Consejo Minero (Mining Council), an entity that represents the 17 largest mining companies in Chile. At the launch of this initiative, the joint statement read: “It is important to affirm that there is no evidence of any illegal or improper practices by mining companies in this arena” (Ministry of Mining et al. 2002).

In relation to the issue of the underbilling of concentrate, COCHILCO reviewed the CENDA report (Riesco 2004a) and concluded that the supposed overselling of concentrate on the spot market by Escondida simply did not fit reality, and neither were there any relevant differences found in relation to market prices. COCHILCO also made reference to the mistakes regarding the comparison of by-products (different ore bodies and processes) and concluded that “the conclusions reached regarding the alleged undervaluation of the calculations of profits and taxes by Escondida are poorly founded” (COCHILCO 2004:5).

A study by COCHILCO’s tax group in February 2004 of the January 2004 version of the CENDA report (Riesco 2004a) was much more clear-cut when concluding that “we think that it has multiple conceptual deficiencies (as well as calculation deficiencies), that lead one rapidly to conclude that the problems of understating results and taxation, lack any depth” (COCHILCO Taxation Group 2004).

Conclusions

Based on circumstantial figures, an attempt has been made to bring an allegation of tax evasion against Escondida, a company that, as is recognized by CENDA itself, has developed a solid reputation for CSR.

After reviewing the foundations of the accusations, there is no evidence at all that would lead one to presume that Escondida has implemented the underbilling of concentrate sales as part of its business practices. Nor has Escondida undertaken to transfer additional benefits to its clients, outside of market criteria.

As it is demonstrated in the body of the present report, the differences between the market price for copper cathodes on the LME, and the income obtained by Escondida for its concentrate, are due to:

- differences arising from comparing two very different by-product portfolios, due to the different characteristics of the ore in each deposit;
- differences related to the volatility of the above-mentioned price, over the period analysed; and
- differences related to the type of contract (“regular contracts”) used by Escondida to sell its products, and the inherent characteristics of the concentrate included in the transaction.

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PART III: RESPONSES

The Debate over the Findings

Response by *Manuel Riesco*

During the first half of 2004, pundits thoroughly scrutinized and debated the findings of the draft version of *Pay Your Taxes! Corporate Social Responsibility in the Mining Industry in Chile*.⁶⁰ Among the critics, some suggested relatively minor revisions to the calculations, some found the analysis of the contribution of transnational mining corporations to development in Chile unbalanced, and some rejected my interpretation of the facts related to the financial performance of BHP Billiton. No one, however, questioned the basic methodology and calculations used to arrive at those conclusions.

The debate involved the Chilean Senate (Lavandero 2004a, 2004b), the Mining Minister (see CENDA 2004b), the Comisión Chilena del Cobre (COCHILCO—the state agency in charge of supervising the mining industry [COCHILCO 2004]), and the Pontificia Universidad Católica de Chile (PUC) (Lagos and Lima 2004; Varela et al. 2004a), as well as the company itself, among others.⁶¹ The debate also involved reporters from major international newspapers and news agencies, as well as BHP Billiton’s United Kingdom and Australian headquarters, together with United Nations agencies (Lavandero 2004a, 2004b; Varela et al. 2004b). During the second half of 2004, the United Nations Research Institute for Social Development (UNRISD) also submitted the paper to several peer reviewers.

The most strident objections to the paper’s findings have been summarized as follows, in a report, written by professors Gustavo Lagos and Marcos Lima, which was requested by BHP Billiton (Lagos and Lima 2004:2):

- “Revenues from the by-products are not comparable, since CODELCO’s [Corporación Nacional del Cobre de Chile] figures include revenue corresponding to molybdenum, sulphuric acid, and net income of the Engineering Division, none of which applies to Escondida. In addition, the fact that each mine produces different by-products, even among the various areas of one mine, is completely ignored.

⁶⁰ The main arguments and findings that appear in the final version are essentially the same as those contained in the draft document.

⁶¹ In Chile, BHP Billiton has not yet answered the paper’s findings directly, except through press statements of Escondida’s chief executive officer, who denied any wrongdoing, but provided no further comment (CENDA 2004a: 04/01/2004). Nevertheless, BHP Billiton has actively tried to prevent the publication of this paper, using disqualifying statements, such as the ones provided to the company by both COCHILCO (“poorly founded”) (COCHILCO 2004:6), and Lagos and Lima: “In summary, the CENDA report is rather simplistic, with obvious errors in methodology, resulting in erroneous conclusions.” (Lagos and Lima 2004:2). It has been noted that such statements bear little relation to the arguments and criticisms actually put forward by this author (Varela et al. 2004a, 2004b). BHP Billiton has also tried to disqualify the author as politically motivated. Such actions have been denounced in letters addressed to both PUC and UNRISD, and signed by CENDA, the Universidad de Artes y Ciencias Sociales (ARCIS) and the President of the Chilean Senate Special Commission for Investigating Mining Industry Taxing Practices (Varela et al. 2004a, 2004b).

- “When comparing an arithmetical average (LME [London Metal Exchange]) with a weighted average (revenue per tonne sold), then just the price volatility during the period in question allows for variations of \$300⁶² per tonne, and annual volatility fluctuates between \$125 and \$299 per tonne, figures which are far greater than the allegations of \$52.4. The only cases where the LME average and the average selling price are the same would occur if the price is constant in the period (no volatility present), or if the same tonnage is sold on each day of the relevant period.
- “In relation to the differences with respect to the market TC/RC [treatment and refining charge] values, volatility also explains them, with the comparison with contracts terms being the only relevant one, \$14.5 per tonne. Escondida could not access the spot market, since virtually all of its production is sold through contracts.”

In addition to raising some of these same objections, COCHILCO described, in some detail, the controls that the Chilean state has in place, concluding that “the export of copper and its by-products is the most rigorously supervised of all Chilean exports” (COCHILCO 2004:1). The Lagos and Lima paper repeats this argument (Lagos and Lima 2004).

It should be noted that the above objections do not question the fact that Escondida obtained far less for by-products, paid treatment and refining charges (TC/RCs) that were above market levels, and, after considering these high charges and shipping costs, sold their copper under the LME price. Nor do they question—except for the minor details mentioned below—the quantities established for these differences. These quantities are: \$-114.5 per tonne for by-products, \$+14.5 to \$+136.2 per tonne for TC/RCs and \$-52.4 per tonne under LME price, adding up to a total net price difference within the range of \$181.3 to \$303.1 per tonne of pure copper sold. In this sense, their scrutiny of my paper’s calculations confirms their accuracy. This was also the case with other examinations of my paper, such as the one by COCHILCO (2004).

Instead of questioning these facts, the above-cited objections try to explain, or rather condone, the differences. However, their explanations seem quite debatable, for the following reasons, among others (Varela et al. 2004a).

- Lagos and Lima correctly point out that CODELCO includes in its by-products revenues, net income from the company’s Engineering Division and sales of sulphuric acid. Nevertheless, these do not amount to more than 10 per cent of such revenues, that is, no more than \$16 per tonne of pure copper. This figure is important for fine-tuning the calculations, but it does not significantly alter the differences found in the paper, which were on the order of \$114.5 per tonne.
- It seems obvious—as emphasized by Lagos and Lima—that all mineral deposits differ from one another, and that minerals from Escondida and CODELCO contain different kinds and diverse contents of by-products. Nevertheless, stating

⁶² All references to \$ are to United States (US) dollars.

this does not explain the huge difference in earnings that the two companies derive from by-products (around \$100 per tonne, even after corrections have been made for sulphuric acid and engineering earnings). CODELCO's by-products come from many different mineral deposits, exploited by five different divisions of the company, which operate in regions located far apart. By-product contents of minerals exploited by CODELCO may constitute a good *proxy* of the *average* by-product contents of Chilean copper minerals, but nowhere near the best. Moreover, not all of them contain molybdenum, which, according to Lagos and Lima, accounts for the huge difference in by-product revenues when comparing Escondida and CODELCO.

- The fact that Escondida reports lower by-product content than CODELCO is certainly the reason why they report lower earnings from them. Nevertheless, that is precisely one of the questions raised by my paper. Is it reasonable to expect that ores from Escondida are so poor in by-products, in relation to those exploited by CODELCO? A simple expression of faith in the numbers reported by Escondida, as professed by Lagos and Lima, does not answer this question. Especially since, as will be argued below, the verification of these numbers by Chilean state agencies was very poor.
- The obvious fact that copper prices continually oscillate above and below the average certainly does not explain why Escondida seems consistently to have shipped its copper precisely when prices were below the average. CODELCO, instead, managed to strike right on the LME average price for its own shipments, over the same five-year period. Nor does it explain why Escondida was charged consistently *over* the ceiling of TC/RC contracts. It must be emphasized that Escondida is the largest copper concentrate exporter in the world, and should be entitled to premium discounts in TC/RCs instead of paying premium charges.
- The fact that Escondida sells under long-term contracts, as stated by Lagos and Lima and COCHILCO, seems to be no argument at all. As I state in the paper, Escondida indeed sold most of its concentrates, at least until 2002, through one long-term contract signed before 1989 with its partial owners. This seems to be precisely the problem, since during the period under study this particular long-term contract resulted in TC/RCs over the market price ceiling, and way above its floor. The same contract regulated shipments that resulted in poor returns for by-products, and net copper prices below the LME average.
- The supervision mechanisms that the Chilean state had in place during the period under study (mechanisms that should have detected all these differences in time) were so lax that the 2001 law against tax avoidance, mentioned in my paper, significantly reinforced the customs controls for copper exports. Furthermore, during the Senate hearings held in March 2004 regarding the findings of my paper, COCHILCO acknowledged that even then, only one or two people were assigned to supervise more than 1,000 copper export contracts per year (each shipment is regulated by a separate contract, even if many of them fall under one "umbrella" long-term contract). In other words, these people have to supervise several complex shipping contracts per workday (Varela et al. 2004a).

A seemingly more relevant line of questioning regarding the long-term contract and BHP Billiton's behaviour was raised by an anonymous peer reviewer of my paper. Concerning the benefits that Escondida derived from the long-term contract, this person asked:

What's wrong with that? ... If BHP Billiton managed to obtain favourable financing for its project on account of its long-term agreement with customers, then this seems motivated by *bona fide* business calculations. Even if lower tax payments are part of these calculations, this seems defensible, even in the context of CSR [corporate social responsibility]. This is particularly so considering that BHP Billiton is the only company that is paying any tax in the country. In a context in which BHP Billiton's competitors are not paying tax by opting to exploit legal loopholes, the paper fails to convince the reader why BHP Billiton has acted in a manner that is incommensurate with generally expected behaviour."

A simple financial calculator may shed some light on the *bona fide* quality of the business calculations behind the long-term contract of Escondida with its customers who are also its partial owners. The cost paid by Escondida in extra charges and lost revenues is equivalent to a premium that exceeds the interest rate of the original loan many times over.⁶³ It seems difficult to justify such a large premium in terms of *bona fide* business calculations.

In the course of this debate, the rebuttals by Lagos and Lima, BHP Billiton and COCHILCO have used very harsh language to try to disqualify the paper under analysis, and the first two tried to dismiss its author as being ideologically motivated. BHP Billiton itself has displayed an unusual degree of interest in the paper and has attempted to prevent the paper and its conclusions from being published (Varela et al. 2004a, 2004b). Nevertheless, as shown, their arguments do not seem to support such actions.

The main finding regarding BHP Billiton still seems to be in want of a satisfactory explanation: Why does "the project of the century", as the CEO of Escondida called it

⁶³ Here we assume that the original funding of the project, which was secured with the help of this long-term contract, was of the order of \$1.5 billion, and that the payback schedule was 12 years (to take into account the extension of the long-term contract with Escondida's customers/owners, which finished in 2002). An interest rate of 5 per cent a year—which seems reasonable for this kind of loan and for a company the size of Escondida—would yield a payment of around \$170 million a year. This payment would increase by about \$10 million a year for each additional percentage point in the interest rate. In other words, an interest rate of 6 per cent would yield an annual payment of about \$180 million, 7 per cent \$190 million, and so on. Over and above the interest payments that the company paid on the loan, it was willing to pay an indirect premium represented by the lost revenues derived from the long-term contract it signed with its related refiners. How significant was this premium? My analysis found that during the 1998–2002 period, the long-term contract resulted in lost income in the order of \$181.3 to \$303.1 per ton, if all items that show significant differences with CODELCO or prevailing market prices are considered (by-products, TC/RCs, net copper sales price). Multiplied by the 869,246 tons per year averaged by Escondida, the extra cost or lost revenue falls in a range of \$157 million to \$263 million a year, during the period under study. This amounts to a premium of roughly 15 to 26 percentage points over the interest rate assumed for the original loan. Even if the by-product contents declared by Escondida were fully accurate (which seems highly improbable because it would mean they are worth one third of CODELCO's by-products) then the annual cost or lost income that derive from the long-term contract would be within the \$67–\$189 per ton range. The total loss would be within a range of \$58 million to \$164 million a year, or 6 to 16 percentage points above the interest rate of the original loan.

(Pickering 2001), end up with financial results where the bottom line is roughly equal to that of the giant, aging and state-owned CODELCO, per tonne of copper produced?

Under other political circumstances—where friendliness toward business and foreign direct investment is not confused with outdated and damaging *laissez faire*—these findings would no doubt generate a thorough investigation. This is unlikely in the present circumstances, even though the Chilean Senate⁶⁴ requested such an investigation when it considered these findings (Lavandero 2004a, 2004b).

Nevertheless, perhaps this debate has already contributed to raising awareness in Chile about the need to review its overly permissive legislation and supervisory mechanisms related to natural resources and mining, in particular.

Concerning CSR, perhaps this debate may also help to raise awareness that companies claiming to be socially responsible need to direct their attention to practices associated with their regular business activities that may be undermining development. Not only should they themselves avoid practising such activities, but socially responsible firms should be expected to encourage efforts within host countries to reform legislation, regulations and supervision mechanisms that facilitate such practices. Instead, some of these firms appear to be actively opposing these efforts, at least in the mining industry in Chile.

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⁶⁴ Two Senate commissions, the permanent Mining Commission and the Chilean Senate Special Commission for Investigating Mining Industry Taxing Practices, took notice of these findings, the first in a special hearing held for this purpose. Both commissions then addressed the appropriate government authorities asking for the methodology used in this paper to be generalized to the whole industry (Lavandero 2004a, 2004b).

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Is Further Debate Necessary?

Rejoinder by *Gustavo Lagos* and *Marcos Lima*

We suggest that the debate over the calculations made by Manuel Riesco of the Centro de Estudios Nacionales de Desarrollo Alternativo (CENDA) in the document *Pay Your Taxes! Corporate Social Responsibility in the Mining Industry in Chile* about concentrate sales underreporting by Minera Escondida was resolved with our document “*Pay Your Taxes!*”: *Faulty Calculations or Ideological Prejudice?* Is further debate really necessary?

In “*Pay Your Taxes!*”: *Faulty Calculations or Ideological Prejudice?*, we showed that, on the basis of the methodology used by Riesco—i.e., comparing the unit sales prices obtained by the Corporación Nacional del Cobre de Chile (CODELCO) with those of Escondida—it is not possible to conclude that Escondida underreported its income. Furthermore, the methodology used in Riesco’s study is inappropriate to estimate and supervise a company’s exports or tax payments. There are three fundamental flaws in Riesco’s method.

- Riesco’s study argues that the ore exploited by Escondida should have the same by-product content (precious metals and molybdenum) as the ore exploited by CODELCO. This is a mistake, as it is known that every deposit contains very different by-product grades. For example, CODELCO bases a significant part of its profits on the sale of molybdenum, which is absent from the Escondida ores and from many other copper ores. Why does Riesco not compare CODELCO’s unit sales price of copper with the unit sales price of copper of the Grasberg mine in Indonesia? He would rapidly come to the conclusion that the sales price of the latter is significantly greater than that of CODELCO’s per tonne of copper produced. Did CODELCO cheat? Of course it did not. The reason is that Grasberg is almost a gold mine; its ore contains much more gold than CODELCO’s. Therefore, let us compare apples with apples.⁶⁵
- Riesco’s study compares the sales price of Escondida’s concentrates with the spot market price. It is known that Escondida, as well as other mining companies representing around 80 per cent of world production both in Chile and abroad, sell a major part of their concentrates at the long-term price, which is different from the spot price. Some years this will prove favourable and others adverse, but it is a

⁶⁵ In his comment *The Debate over the Findings*, Riesco, recognizing the point that every mine has different by-products, attempts to use CODELCO income as a standard. This is a big mistake, because the vast majority of the CODELCO mines have molybdenum as their by-product. So much so that Chuquicamata costs have been lower than those of Escondida (which has a higher grade) due to the effect of the credit for by-products associated with molybdenum. An extreme case is the Chilean Los Pelambres mine, whose income from by-products reached 22 per cent of the total during the first half of 2004. Riesco wonders, “Is it reasonable to expect that ores from Escondida are so poor in by-products, in relation to those exploited by CODELCO?”, accusing us of simply accepting Escondida’s figures as an act of faith. The answer is simple: it *is* reasonable to think that the Escondida concentrates, and those of many others, are poorer in by-products than CODELCO’s.

- commercial decision whose result is only known *ex post*, it being impossible to “try to buy the winning ticket after the draw”.
- Lastly, Riesco’s study compares the sales price of concentrates and refined copper, using simply the arithmetic average of the price of grade A cathodes on the London Metal Exchange (LME) and contrasting it with the weighted average of what Escondida obtains for its concentrates and cathodes, i.e., income divided by tonnes sold. Because the price of concentrates and refined copper fluctuates strongly throughout any given year, it is difficult for arithmetic and weighted averages to coincide. Moreover, the variation in one year of the price of concentrates is even more pronounced than the variation of refined copper on the LME. Therefore, in order to make a correct estimate of sales prices it is necessary to be informed regarding the data and dates of the sales contracts as well as what type of contracts are involved in addition to the product contents. But there are also other factors that should be taken into account in a sales-control model, such as the premiums negotiated in each market;⁶⁶ the futures and hedging contracts that the companies use to nail down sales prices; and the composition of metal impurities in the concentrates, which can bring its spot prices down, etc.

As just pointed out, because the method used by Riesco is inappropriate for the purpose for which he used it, it is pointless to compare each of the values of his report with average revenues per tonne coming from Escondida or from any other mine. In other words, Riesco’s recipe not only lacks many ingredients, his recipe also lacks the right quantities for the ingredients that he used.

In his study, Riesco also suggests a tax fraud conspiracy of major international proportions (between \$800⁶⁷ million and \$1.3 billion), in which not only Escondida would be involved but also the numerous companies in 14 countries that buy the concentrates⁶⁸, their executives, laboratories, boards of directors, as well as the three companies that own Escondida plus the International Finance Corporation (IFC) (a World Bank subsidiary), their laboratories, boards of directors, presidents, trade managers, etc. And this without considering attorneys, auditors and advisors. In short, several hundred individuals and dozens of companies across several continents would be involved in this conspiracy. Among the many questions that arise on considering such a complex operation—which because of its very nature must be “secret”—is that the smelters that are processing the concentrates would be producing more gold than is officially brought in. Is it feasible to imagine that the countries operating those smelters would not realize what was going on?

As all these companies are quoted at exchanges in London, New York, Tokyo, Melbourne and other countries, did anyone think of the consequences for these

⁶⁶ Has Riesco considered what premiums CODELCO obtains for its cathodes in its sales prices, which can reach several dozens of dollars per ton? Should not these premiums be subtracted from the obtained average prior to comparing the prices with the LME average?

⁶⁷ All references to \$ are to United States (US) dollars.

⁶⁸ Escondida’s concentrates in 2001 were sold as follows: 9 per cent to smelters in Chile, 11 per cent to smelters in Germany, 28 per cent to smelters in Japan, and the rest to smelters in 11 countries.

companies once this gigantic fraud was discovered? This would involve the largest mining companies in the world, not only BHP Billiton. It would be the fraud of the century, greater than any we can remember. And, of course, if these companies act like this in Chile, they can be expected to do the same in other countries.

The scheme proposed by Riesco has the makings of a best-selling spy novel in which, moreover, the hundreds of people aware of these operations kept quiet for years on end and were reaping juicy rewards for their silence.

Our position is that, regardless of whether or not Chile imposes greater controls on export contents⁶⁹, what truly guarantees that what is being sold is what is being declared and not something else is not the number of Chilean customs agents that control exports, but that we are operating in an open products market where controls are not enforced at a state level but at the securities exchanges where the shares of these companies are transacted. In addition, the regulations on product sales and on international trade are extraordinarily strict and the sanctions imposed by those exchanges—and the market—for behaviour such as the one under analysis are so dramatic that it is difficult to believe that some of the most important mining companies of the world would risk engaging in such actions. If such an operation were proven, it would possibly result in the bankruptcy of the companies involved due to the innumerable lawsuits that would be filed from several countries by different actors, including governments.

Riesco's accusation blames these foreign companies for having induced Chile to trade on false terms for years on end without anyone being aware of this. This is not only an insult to the intelligence and ability of our compatriots, but also fails to withstand even the most elementary analysis in today's globalized world market.

Finally, when Riesco argues how difficult it appears to him that “the giant, aging and state-owned CODELCO” has financial results equivalent to those of Escondida, “the project of the century”, he makes a gratuitous attack on the effort that thousands of workers have made over the past decade to transform this state-owned company into one of the most competitive in the world, by reducing its costs by 22 cents per pound of copper (a 35 per cent reduction) and increasing its productivity by over 80 per cent.

Not everything is as may be perceived by the jaundiced eye. A state-owned company *can* be efficient, and a private company *can* pay its taxes correctly.

⁶⁹ For all copper concentrate exports, Chilean customs requires (Regulation No. 2757) an accredited laboratory certificate for the concentrate weight and for its copper, gold and silver content. Also, the customs should take a sample of the concentrate and store it. All this information is included in a unique export certificate. After the concentrate reaches its destination and once the buyer has analysed the copper, gold and silver at the destination country, the definite payment is arranged between the seller and the buyer. If the information of the sale is different from that of the unique export certificate, the Chilean state records this and makes all export calculations with the actual sales price. Additionally, Chilean customs requires chemical analysis for the other 26 elements in concentrates exported.