A rich seam: who benefits from rising commodity prices?

January 2007

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Front cover: Mine workers at NFC Africa Mining shaft at Chimbishi, Zambia. Since the sale of the mine by the government in 1997, the mine shafts have been left to flood and the infrastructure of the plant left to rot.
Front cover photo: Christian Aid/David Rose

Executive summary

Recent years have seen dramatic changes in the fortunes of a number of primary commodities. The price of copper went up nearly five-fold between 2002 and 2006, while other minerals such as gold, nickel and oil have also seen spectacular increases.

Mining companies have done well in the changed climate. Profits for the industry as a whole in 2005 were eight times the 2002 level.[1] The first eight months of 2006 saw mergers and acquisitions worth over U$60 billion – more than any year since 1995.[2]

Many of these commodities are exported from developing countries. Fifteen of the top 20 gold producers are developing countries[3]. Similarly, 12 of the top 20 copper producers and nine of the top 20 nickel producers are developing countries. The top five developing-country copper producers accounted for three-quarters of all copper mined globally in 2005.[4]

Using new research from Zambia, Bolivia and the Philippines, this report shows that the companies which are reaping huge profits from extracting valuable and finite resources from developing countries often pay very little to the countries' governments in taxes or royalties. Other benefits from resource extraction, such as employment, are also negligible. In addition, the presence of extractive industries can involve heavy costs.

This report shows that:

In **Bolivia**, the benefits from the oil and gas industries following privatisation were outweighed by the costs borne by the economy. The government collected slightly more than US$2 billion in taxes, royalties and other payments between 1999 and 2004, while losses from subsidies, the cost of privatisation and foregone taxes were higher, at $2.2 billion.

In **Zambia**, secret deals have tied the government into contracts with copper companies for 20 years. Documents made public for the first time by Christian Aid show that companies investing in newly privatised copper mines pay almost no taxes or royalties, and have shed most of the social responsibilities of the former state-run enterprises. These contracts mean that Zambia is not benefiting from the soaring price of its main export. Taxes and royalties paid by copper companies to the government have halved as a proportion of the value of copper extracted since the price boom began in 2002.

In the **Philippines**, government promises that profits from mining would be shared equally between companies and the Filipino people are ringing increasingly hollow. Between 2001 and 2005, mining companies paid less than 15 per cent of their profits in taxes and royalties to the government – a far cry from the 50 per cent the government promised in the face of protests from anti-mining groups in the country.

These countries are not alone. Most developing country exporters receive a tiny fraction of the profits from the minerals extracted from their soil. As well as deals which allow companies to pay much lower taxes than those they pay in richer countries, firms also employ various tax avoidance tactics to get money out of developing countries. New figures compiled by Christian Aid show that there is significant under-pricing of exports to avoid tax. Our research found under-pricing valued at between 0.1 and 29 per cent of total exports in 2005.

In the 1980s and 1990s, the World Bank and other donors encouraged developing countries to rewrite their mining laws to lower taxes, reduce environmental and social regulations and offer incentives to encourage investment. However, research from both the World Bank and leading accountancy companies shows that low tax rates and other incentives do little to encourage companies to invest. In most

cases, a company will invest wherever the resources are, regardless of the specific incentives offered.

Developing countries must use their bargaining power to get the best deal possible with companies, and ensure that their natural resources contribute to development and poverty reduction. Governments should use the extra leverage of high commodity prices to demand better terms from investing companies. If the international community is serious about its commitment to poverty reduction, it will support governments who try to make sure that they use their finite resources for the benefit of their own populations.[5]

These case studies are based on collaborative research with our partners: CEDLA in Bolivia, Action for Economic Reform in the Philippines and CCJDP and ZCSTN in Zambia.

Introduction

That tax should be an issue in elections is no surprise. However, the recent Zambian elections were fought not on the tax burden for individuals, but the taxes paid by companies mining copper in the country. In Bolivia, the government's commitment to increase taxes on companies extracting oil and gas has led to threats of court action by the affected firms.

In the Philippines, a long campaign against the environmental and social impacts of mining has been reinforced by a new concern about the huge incentives given to foreign companies to extract the country's mineral wealth. A court case challenging the legality of laws which, according to activists, handed the mining sector over to foreign companies, led to mining laws being declared unconstitutional – a decision which was later overturned on appeal.

The source of the protests in each case is the undeniable fact that the presence of valuable commodities such as copper, gold and oil has not led to tangible benefits for the majority of the population in these countries. They are all desperately poor, with under-five mortality rates of between three in every hundred in the Philippines and 18 in every hundred in Zambia. All the countries also suffer from a major shortage of resources, with debts ranging from 36 per cent of national income in Zambia to 73 per cent in the Philippines.

While campaigns are being fought in developing countries to get a fair share of the profits of the mining bonanza, the companies are reaping the benefits. In 2005, profits for the industry as a whole were eight times the 2002 level.[1] The first eight months of 2006 saw mergers and acquisitions worth over US$60 billion – more than any year since 1995.[2] It is this apparent contradiction that we set out to investigate in this report. Using new research from Zambia, Bolivia and the Philippines, we show that the companies which extract valuable and finite resources from developing countries often pay the government next to nothing in taxes or royalties. Other benefits to the countries from resource extraction – such as employment – are negligible.

Following advice from the World Bank and other donors, developing-country governments tied themselves into binding contracts with companies which offer the countries only the smallest of shares in their own mineral wealth. Millions of dollars are flowing out of countries which desperately need the resources to fund their own development. There is a growing movement in many countries to change the terms of their agreements with companies. This report shows why those movements are so timely and so just.

Investment, investment policy and extractive industries

Developing countries have long been told that foreign investment will transform their economies, attracting much-needed capital, generating jobs and leading to economic growth. As such, they are strongly encouraged to prioritise attracting foreign investment over any other measure which might promote industrialisation and develop the domestic private sector. This position is widely endorsed by the British government, with the secretary of state for international development, Hilary Benn, saying recently that: 'The single most important thing a developing country can do to benefit from the trade and investment opportunities thrown up by globalisation, is to get their investment climate right'. [3]

Strategies to attract foreign investors normally emphasise a strong protection of investors' rights (including the right to international arbitration). This ensures that foreign companies can freely remit profits, abolishes preferential treatment for local businesses, applies a 'light' regulatory approach and provides various incentives such as keeping wages and tax rates low.

Investment is being promoted as the new panacea for poverty. However, the benefits of foreign investment are by no means certain – particularly if the government has offered incentives and liberalised its policy regime in order to attract it. The problem is not confined to developing countries. In the UK, for example, local authorities regularly compete for foreign investment, offering various incentives to attract companies to their area.

Lessons from east Asia vividly demonstrate that for countries to truly benefit from foreign direct investment (FDI), this must be managed strategically, making explicit efforts to create links between foreign companies and the local economy.[4] However, such lessons are rarely applied in practice and developing countries are still encouraged to adopt a liberal investment framework. Any attempts to manage or regulate FDI in such as way as to maximise benefits and minimise costs are discouraged by donors and technical advisors who are paid by institutions such as the World Bank.

The three countries whose experience with FDI is examined in detail in this report have all undergone extensive economic policy reforms over the last 20 years, with the aim of attracting more FDI. Since they all have extensive mineral and/or oil deposits, they particularly courted FDI in these sectors.

All three countries, and many others who adopted similar strategies, have seen increased levels of foreign investment.

However, the point of investment is not how much flows into a country, but what it contributes to development and poverty reduction. In all three cases studied here, the policies used to attract FDI had the effect of reducing any benefits brought.

The negative impacts of FDI in the extractive sector – both on the environment and on communities living near to mines or oil wells – have been extensively documented, not least by Christian Aid.[5] This report shows that the costs borne by affected communities are often not counterbalanced by benefits elsewhere in the economy. New research from Christian Aid shows that companies extracting valuable and finite natural resources from very poor countries are paying those countries a tiny fraction of the true value of the resources.

Developing countries, extractive industries and the commodity price boom

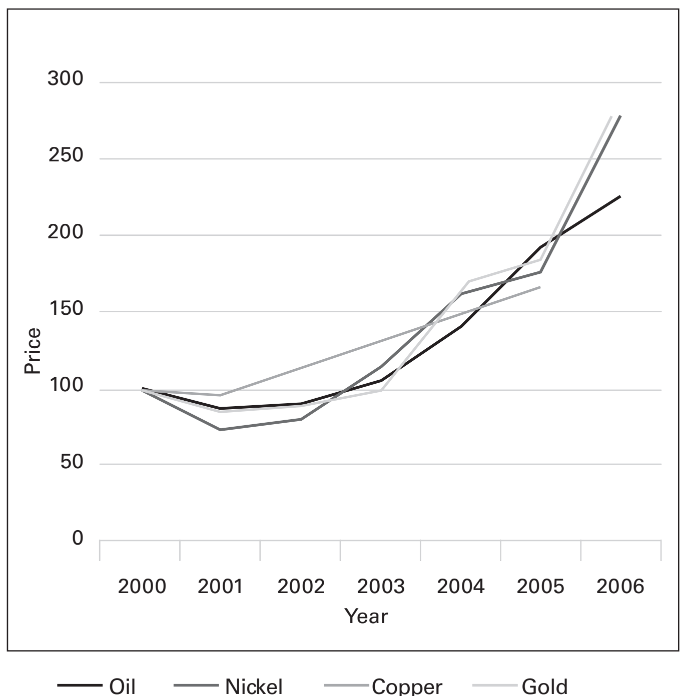
The lack of noticeable benefits from natural resource extraction is particularly striking given recent huge rises in the income to be made from these commodities. Since 2002, the prices of many commodities have been on a steep upward curve. The price of copper in 2006 was five times its price in 2002. Oil, nickel, platinum, iron ore and gold have also seen precipitous price increases.

This price rise leaves many developing countries in control of increasingly valuable and desirable assets. Resources like copper, gold, nickel and oil tend to be concentrated in particular countries – many of them in the developing world. Not surprisingly, investment in natural resource extraction is rapidly increasing in countries which have large amounts of these commodities. For example, there has been more FDI in Ghana's mining industry in recent years than in all other sectors of its economy combined.[6] Investment in natural resources in all developing countries and transition economies increased three-fold between 2004 and 2005.[7]

Ghana, Tanzania and Mali together accounted for nearly six per cent of all the gold mined in the world in 2005. Add South Africa, the world's biggest gold producer, and Africa produced nearly 20 per cent of the world's gold. The top five developing-country producers accounted for over 40 per cent of world gold production in 2005. Fifteen of the top 20 gold producers are developing countries.[8]

Similarly, 12 of the top 20 copper producers and nine of the top 20 nickel producers are developing countries. The top five developing country copper producers accounted for three-quarters of all copper mined globally in 2005. [9]

Table 1: Commodity price index (2000=100)



Sources: oil/nickel: World Bank data; copper: International Copper Study Group, Copper Bulletin (Lisbon, April 2006), gold: GFMS, Gold Survey 2006

In contrast to the usual gloomy news about trading prospects for developing countries, the commodity price boom should be cause for optimism. At last, developing countries have something to sell that the world wants and is prepared to pay for. However, the profits do not seem to be made in developing countries. Speaking at a World Bank seminar on mining taxes, Tanzania's minister of mines said recently that: 'The surge in price for gold and other precious metals has not been felt in our economies.'[10]

This report looks at why profits from natural resources are flowing out of developing countries, and are not kept for development. It shows that countries are locked into contracts with the companies extracting resources which allow the companies to pay almost no tax and provide few other benefits to the countries where the natural resources come from. In many cases, countries have been encouraged by the international community – particularly the World Bank and the International Monetary Fun (IMF) – to lower taxes in the belief that this will attract investment. But the World Bank's own research shows that this is a misguided policy.[11]

At the G8 summit in 2005, donors committed themselves to an extra US$50 billion in aid every year by 2015. But at the same time, donors and the institutions they fund, such as the World Bank, are encouraging governments to adopt policies through which they forego millions of dollars in lost taxes and royalties on finite resources. Developing countries which try to break this deadlock and renegotiate the terms of their contracts with companies are given little support from the international community. Governments pledging to get more resources into poor countries in the form of aid have a responsibility to help those countries keep more of the funds they can generate from their own natural resources.

This report focuses on investment in the extractive industries. Other primary commodities that developing countries export, have also experienced booming prices in the last few years. However, the extractive industries have particular characteristics – both in relationships between investing companies and governments, and the way they affect the local economy. This is why the report focuses on the extractive sector.

How developing countries can benefit from natural resource extraction

The direct benefits to countries from extractive industries come mainly in the form of direct payments to government, to individual workers and for development projects, as well as indirect benefits to local companies which supply the industry. Of these, payments to government are potentially the most significant.

In a large part, this is because natural resource extraction tends to be capital-intensive and to employ relatively few people. In Bolivia only 1.4 per cent of the workforce is employed by the oil and gas industry, while in the Philippines just over a third of one per cent – less than 135,000 people – are employed by mining companies. These figures are typical of the sector. The Ghana Chamber of Mines estimates that, despite minerals being Ghana's major export earner, less than 11,000 people out of a population of more than 20 million are employed by mining companies.[12] Even in South Africa – where mining has been a key part of the economy for years – less than three per cent of the workforce is in the sector.[13] Employment, therefore, will not be the main way that natural resource extraction affects the local economy.

This has not always been the case. In the past, mining companies in Ghana, for example, employed around a third of the formal sector workforce. However, technological changes, and changes in mining practices (such as the shift from deep-pit mining to the more environmentally destructive open-cast mining) have made the industry more capital-intensive and less labour-intensive.

Other benefits – to local communities or indirectly to local companies – are also very small. The Zambian case was particularly striking, since the state-owned company that ran the copper mines prior to privatisation also supplied key services such as health centres and schools to the local population. The majority of these have not been taken on by the new mine owners. Although most mining companies in the Philippines have social programmes, they spend very different amounts – from some Php100,000 (US$2,000) a year to over Php4 million (US$84,000) a year. These funds are marginal when compared to the total revenues obtained from mining in the Philippines each year (US$580 million-US$ 912 million).

Forms of taxation in the extractive sector: taxes, royalties and common incentives

Royalties: These are a payment (some would call it a tax) paid by the extractive industries for the right to extract minerals from land belonging to the government of the countries where the resources are located. They are paid as a fixed percentage of the value of production. In some cases the royalty is calculated on the sale price of the extracted ore; in others on its value after direct costs of production have been taken into account. In economic terms, royalties are a mix between a rent for use of the land and compensation for the fact that, once extracted, the mineral ores are no longer available for future use. An IMF survey of mineral taxation in developing countries found that the royalty rate varied between two and 30 per cent, with most between five and 10 per cent.[18]

Corporate taxes: These are paid as a percentage of profits (once the costs of operating the business have been deducted). There is usually a standard rate for all businesses, though companies operating in particular sectors might be offered lower rates in order to attract investment. Tax rates in developing countries range from 12 to 85 per cent, but in practice these rates are rarely paid, due to the wide range of incentives and allowances that are offered to companies.[19] Such incentives often have the effect of reducing the amount of income that is taxable – for example, through allowances

Again, this is a general trend. The Ghana Chamber of Mines estimated that payments for projects in local communities represent about 14 per cent of the royalties that mining companies pay to the government, or about US$3 million a year.[14] This is less than 0.5 per cent of the value of the minerals extracted in Ghana by the same companies each year. Companies in the extractive industries also tend not to use local suppliers – often for good reason, as natural resource extraction is a highly specialised business which relies on high-tech equipment. For that reason, indirect benefits in the economy are often as important as direct ones. For example, Tanzania Breweries ascribed a 19 per cent increase in profit in 2005 partly to 'the multiplier effect of mining activities'.[15] The extent of these benefits will, however, always be limited because of the relatively small number of people engaged in extractive industry activities.

As a result, potential benefits to countries that export natural resources come mainly from the taxes or royalties paid by companies.[16] These can form a substantial part of total government revenue – over 50 per cent in Botswana, for example.[17] However, the evidence presented in this report shows that many governments have foregone these potential benefits. Following advice from institutions such as the World Bank, they have been convinced that cutting taxes is the best way to attract investment. There is also evidence that governments are finding it hard to collect the monies due to them, even under the present permissive tax regimes.

Clearly, governments have to balance their need for revenue with what companies are prepared to pay if they are to invest. But there are a growing number of countries who believe that they have given away too much to companies and are now negotiating to get a bigger share. The evidence presented in this report provides strong evidence to support their case.

Have exporting countries benefited from high commodity prices?

Data on taxes and royalties that companies have paid to governments is not readily available. However, an examination of the figures in those countries where data does exist reveals a mixed picture. In two of the three countries studied in depth in this report, payments made by companies to the government fell as a percentage of the money made during the commodity price boom. In Zambia, the share of benefits from mining that goes to the government has halved since the start of the price boom in 2002. Only in the Philippines did the share of income paid to the government hold steady after 2002.

Again, Bolivia, Zambia and the Philippines conform to a general trend. While some countries have managed to keep their share of earnings level or even increase them during the commodity price boom, others have taken a declining share of the value of the commodities being extracted from their lands. Table 2 compares tax and royalty revenues paid to governments with the reported value of production in a number of countries which produce significant shares of global output for high-value commodities. These figures should only be taken as indicative, since there is widespread evidence that companies systematically misreport data in order to avoid taxation. In the Philippines, an independent commission found that in the case of one company, Lafayette, 'there were strong indications that Lafayette underreported its production of ores

for depreciation of capital costs, or through 'depletion allowances', which some analysts define as 'a subsidy for the company for depleting the country's reserves'.[20]

Other taxes: In common with other companies, those in the extractive sector may also be subject to taxes on imports and exports, on dividends they pay to shareholders ('withholding tax'), and on various aspects of company activity – for example, the cost of employing staff.

Common tax incentives: Governments frequently offer incentives in the form of reduced taxes to encourage investment in particular sectors. In the extractive industries, it is common to waive import and export taxes, and offer companies the chance to offset the cost of equipment and minerals exploration against tax at much more favourable rates than those they might use to calculate their commercial profits. It is, for example, commonplace for companies to write these costs off for commercial accounting purposes over the entire period during which the mine is expected to operate. In extreme cases, they may be allowed to write off the entire cost when it is incurred, massively reducing their taxable – but not their commercial – profits. This translates into a considerable saving in tax paid. Other incentives may include tax-free periods, special rates of deduction for certain expenses, such as interest, on borrowing, or a guarantee that tax rates charged when an operation is first set up will never be increased.

and of processed gold/silver.'[21] In Tanzania, a government-commissioned report by an independent assayer found evidence that mining companies were inflating their costs to avoid paying taxes and royalties.[22] In Mali, a 2003 IMF report commented on the inadequacy of gold output reporting,[23] while the US government's own figures on gold mining in Ghana include the warning that the data 'does not include smuggled or undocumented production'.[24]

Since the commodity price boom, four of these seven countries have taken a declining share of revenues from natural resource extraction. Two have increased their share, and one has seen little change.

In four of these countries, total revenue receipts from the extractive sector have risen by around a third or more. In South Africa they have fallen, while in Zambia they have barely risen. By contrast, in Papua New Guinea they have risen sharply.

It should be stressed that these changes are almost all from a very low base. In Zambia, mining contributes only about 12 per cent of all corporate taxes, despite accounting for around 70 per cent of export revenues. Mining taxes and royalties make up around a third of a per cent of the total government budget. The World Bank commented in 2003 that the contribution of mining companies to government revenues in Ghana was 'not impressive', noting that gold companies paid less tax than cocoa exporters, despite gold accounting for a higher proportion of

Table 2: Government revenue from extractive industries as a percentage of total value of reported mineral production in selected developing countries

Country	Key commodity and rank	2002	2003	2004	2005
Ghana	gold (11)	5.5	6	6.4	-
Tanzania	gold (12)	14	-	8	10
Papua New Guinea	gold (10), copper (14), oil	7	16	15	24
Philippines	gold (16)	4	4	8	4
South Africa	gold (1), nickel (9), platinum (1)	10	9	4	-
Zambia	copper (10)	1.5	1.4	0.7	-
Bolivia	oil, natural gas	31	28	27	-

Sources: Ghana: Ghana Chamber of Mines (2006); Tanzania: Bank of Tanzania; Papua New Guinea: Bank of Papua New Guinea; Philippines: AER (2006); South Africa Chamber of Mines, Zambia: Zambia Central Bank; Bolivia: Bolivia Oil and Gas Report; Christian Aid 2006.

Botswana

A few developing countries have managed to reap rich rewards from extractive industries while ensuring the continued profitability of the companies that work there. Botswana's impressive growth record (with an average GDP growth rate of 7.8 per cent since the 1980s)[26] has been founded on profits from diamond mining, which contributes over half of the revenues to the Botswana treasury.

Botswana is the world's largest producer of diamonds. The biggest mining company operating there, Debswana, is jointly owned by the government and the South African De Beers mining company. Direct revenues from diamond mining constitute more than 50 per cent of total government revenues.[27] This contribution is made up of royalties charged at 10 per cent of the value of production, corporate tax at 35 per cent, and a variable dividend paid to the government, to bring the total contribution up to an agreed share – more than 70 per cent – of the company's profits.[28]

Together with taxes on the export of diamonds and interest payments on foreign exchange reserves that come from diamond profits, some estimates put the total contribution of the diamond industry to government revenue at more than 80 per cent.[29] The company also provides direct benefits to its employees, giving them free housing and medical care, including anti-retroviral drugs to HIV-positive employees.[30]

Though its contribution to government revenues is impressive, mining in Botswana has limited links with the rest of the economy. Debswana only employs 6,500 people, and the government has not been successful in its attempts to develop diamond processing enterprises. Most of the inputs for the mines are imported, and most of the products are exported.

Botswana has kept tax and royalty rates much higher than the countries in this study. However, key to the government's high share in mining profits has been the joint ownership of the diamond company, which ensures that it receives dividends as well as taxes. Botswana is not alone in this – a few other countries, such as Mexico, also have joint ownership of extractive industries and have reaped the benefits accordingly. Many other countries, however, have ended the practice of demanding a government share in any new mining enterprise – Ghana, for example, ended this practice in the 1990s.

Table 3: Percentage change in absolute level of government revenue 2002-2004/5

Country	Key commodity and rank	% change in absolute government revenue from extractives, 2002-2004/5
Ghana	gold (11)	30
Tanzania	gold (12)	41
Papua New Guinea	gold (10), copper (14), oil	365
Philippines	gold (16)	39
South Africa	gold (1), nickel (9), platinum (1)	-62
Zambia	copper (10)	1.7
Bolivia	oil, natural gas	75

total exports.[25] Similarly in Tanzania, mining revenues account for less than five per cent of total government revenue, despite gold being Tanzania's major export.

Encouragingly, it is clear that some countries are managing to strike better deals with companies than others – and they still remain major sources of investment and major producers (see 'Botswana' below).

Tax avoidance

It is clear that many companies enjoy relatively low rates of taxation in developing countries because of the incentives they are offered. However, when this is added to the considerable evidence of tax avoidance by companies in the extractive sector, it is clear that countries are losing out even more than official figures indicate.

Companies can legally avoid tax by reducing their taxable income. They can either take advantage of accounting methods that allow them to increase their costs in a particular country (so that less profit remains to be taxed once costs are deducted) or they can reduce their declared income (so that less profit is available to be taxed).

There is evidence of both practices in developing countries. A report commissioned by the Tanzanian government indicates that companies operating in the country were overstating the costs of production, transport and capital costs, in order to reduce their tax burden.[33] In the Philippines, an independent commission appointed by President Arroyo reported that Philippines-Lafayette, 76 per cent owned by the Australian company Lafayette, underreported its gold production from one mine by 50 per cent and its silver production by 74 per cent.[34]

Christian Aid has obtained figures which imply that these

Botswana's experience illustrates that many developing countries may find it profitable to rethink such policies.

International efforts to increase the transparency of diamond revenues have centred on the Kimberley process – a response to concerns about the role the diamond trade has played in fuelling conflict in various parts of Africa. Botswana and De Beers have been key players in this effort, which has been largely successful, thanks to independent monitoring and high levels of commitment from stakeholders.

While the government has ensured that it gets a large share of diamond profits, it has had less success turning those profits into human development. Botswana is still a very poor and unequal country, with a high rate of HIV infection. The extent of the economy's dependence on diamonds is not sustainable either – given that the supply of diamonds will run out within decades. The country is making attempts at diversification, though with limited success.

The resource curse

The extractive industries are often assumed to be a key to development for poor countries with natural resources, attracting much-needed investment and fuelling growth. However, while this is true for some countries – such as Botswana – they are the exception rather than the rule. In a famous study of 95 developing countries with high ratios of natural resource exports relative to GDP, economists Jeffrey Sachs and Andrew Warner found that growth rates and poverty reduction in most of these countries were slower than average. Countries with higher rates of dependency on natural resource exports experienced slower growth per person.[31]

Other studies have borne out this conclusion. A recent examination of the impact of investment in different sectors found that, while investment in natural resources was not associated with increased growth rates, investment in other sectors such as manufacturing did lead to increases in growth.[32] One key reason for this is that the huge sums involved in extractive industries have often proved irresistible to corrupt leaders, as Nigeria.

Those developing countries that have bucked this trend, as well as the developed countries that have benefited from resource extraction – such as Norway, Canada and the US – have done so with effective and accountable management of the revenues from natural resources.

are not isolated incidents. Evidence of tax avoidance practices is difficult to obtain, but a close examination of trade figures can give some clues.

A key method companies use to avoid taxes is to adjust their profits and losses in different countries by manipulating prices in trade between subsidiaries of the same company. For example, if a US company has a diamond-mining subsidiary in Ghana, it can set the price for the trade in diamonds between the Ghanaian and the US companies at levels which allow tax avoidance. These prices will show up in trade figures collected by the US government, which allow them to be analysed.

We have found some astounding examples of low-priced commodity imports into the US from developing countries. In 2004, nickel was imported from Chile to the US at a price just over one-thousandth of the world price. The US company paid the Chilean company US$219,883 for the nickel – the median world price would have been US$125 million. This means that the Chilean treasury lost out on nearly US$125 million of taxable income.

Also in 2004, over 400,000 tonnes of platinum was imported into the US from the Dominican Republic, at a price that was only just over three-thousandths of the world price. Had the median price been paid, the Dominican treasury would have charged tax on more than US$4.5 million of export income.

A Christian Aid-commissioned study on the mis-pricing of imports into the US from a number of the top developing-country commodity exporters found significant evidence that such exports were being under-priced. Such under-pricing reduces the tax liability of the developing-country exporter. Extrapolating global figures from this US data, estimates of taxes lost through transfer mis-pricing are considerable (see Table 4).

Table 4: Estimated export earnings lost through transfer mis-pricing by mining companies (US$ million)

Year	Chile	Dominican Republic	Peru	Philippines	South Africa
2002	461	30	72	82	412
2003	353	9	49	1	84
2004	350	389	24	1	86
2005	622	235	4224	18	38

Source: calculation by New Economics Foundation from figures supplied by Dr Simon Pak, Pennsylvania State University.

Access to foreign exchange

Mining products are usually exported from developing countries, and are therefore an important source of foreign

The debate on tax avoidance in the Chilean mining industry

A detailed investigation of tax avoidance practices by mining companies in Chile, the world's largest producer of copper, revealed some striking evidence. In the ten years between 1993 and 2002, companies in Chile earned around US$17 billion (net) from copper sales. However, these companies only paid 10 per cent of this in tax to the government, while they benefited from tax credits of US$2.6 billion. In other words, they took more out of the Chilean exchequer than they put in.

One company, Exxon, claimed to have made a loss every year for 23 years, and paid no taxes during this time. It did this by exporting the profits from its Chilean operation as interest payments on loans to another subsidiary based in Bermuda. The Chilean operation had, on paper, borrowed so much money from the Exxon subsidiary in Bermuda that it was technically bankrupt. Ninety-six per cent of all the mining company's liabilities were owed to this one financial company. The Chilean government and public were alerted to the possibility of fraud when the supposedly bankrupt, loss-making company was sold for US$1.3 billion.

Another company, BHP Billiton, was found to be receiving an average price for its copper that was around 25 per cent lower than the average earned by the Chilean state mining company Codelco in the same period. BHP also paid more than Codelco for processing the copper, which was done either by BHP subsidiaries or their fellow owners of the Escondida mine. If it hadn't been for these unexplained differences in the price they received for copper and the price they paid for processing, BHP would have been liable for 46-76 per cent more taxes than it paid between 1998 and 2002.

These figures were challenged by academics commissioned by BHP Billiton, and have been the subject of much debate within Chile. However, the government, persuaded that there was a problem, has since introduced new laws to improve government revenue generation from private mining companies.[35]

exchange earnings. Such earnings are traded for domestic currency and can then be used to pay for imports. However, an important feature of the economic policy reforms of the 1980s and 1990s designed to attract FDI was the liberalisation of foreign exchange transactions, and contracts between mining companies and governments often explicitly confirm a company's right to hold their export earnings overseas. This has deprived domestic banks and therefore domestic consumers in developing countries of an important source of foreign exchange. In practice, this makes it harder for domestic companies to acquire the foreign exchange they need to buy imported goods.

Have companies benefited from the increase in primary commodity prices?

A 2005 review of trends in mining, produced by PricewaterhouseCoopers (PWC), was subtitled 'Let the Good Times Roll'. This was with good reason, since it reported that net profits for the 40 mining companies surveyed were eight times higher than they had been in 2002.[36]

What is true for these 40 companies is true for the main companies producing the commodities extracted from developing countries. Since 2002, the profits of the major companies in the sector – which all get most of their income from mining – have shot up. Table 5 shows that for most companies, after-tax profits increased faster than their pre-tax profits during the 2002-05 period, indicating that as commodity prices have increased, the major companies extracting them have kept a larger share for themselves.

It is clear that many countries are not driving a good bargain. While company profits soar, government revenues are less stable – in many cases they are even falling as a proportion of total sales. The rise in government revenues from natural resource extraction is lagging far behind the increase in company profits in most of the developing countries we have studied for this report.

Countries that don't get the best deal possible from the companies that mine their mineral resources have in effect given up income that could have been spent on health and education, developing roads and other infrastructure, or the myriad of things that add up to development and poverty reduction.

They are also sacrificing what might be a unique opportunity – commodity prices will not necessarily stay as high as they have been in the last few years, and individual countries' commodity supplies may run out. It is therefore vital that developing-country governments get the best deal they can from the companies that extract their natural resources, and the international community must do all it can to assist them with this.

Table 5: Pre-tax profits (US$ million), selected companies

	Key commodity and rank	% change in gross profits, 2002-2005	% change in net profits, 2002-2005
BHP Billiton	copper (2), nickel (3)	211	251
Phelps Dodge	copper (3)	599	-603
RioTinto PLC	copper (5)	458	812
Newmount Mining corp	gold (1)	392	282
Anglogold Ashanti Ltd	gold (2)	-131	-136
Barrick Gold Corp	gold (3)	157	2569
Inco	nickel (2)	163	243
Shell	oil	157.	175
BG Group	gas	188	220

Source: company annual reports and financial statements, various years.

There are two ways that countries might lose out in their dealings with companies. The first is if they make a bad deal, accepting less in taxes and royalty payments than the company might have been prepared to pay. The second is if the companies spirit money out of the country to avoid tax liability. Our research shows that both are happening. All three countries studied agreed to considerably lower taxes for companies in their extractive sectors, giving away many millions of dollars in lost revenue as a result. There is also evidence that companies are using various mechanisms to transfer profits away from developing countries and reduce their tax liabilities. These are not isolated incidents, but examples of a more widespread problem.

Developing-country governments are increasingly concerned about the revenues they are losing through natural resource extraction. Civil society movements in all three

countries in our study are actively pressing the government to make changes in the terms of their contracts with the extractive companies. Both Bolivia and Zambia have announced their intention to do just this, and they are not alone. The South African government recently passed a new law introducing royalty payments for mining companies for the first time. Liberia is also renegotiating the terms of its contract with steel producer Mittal for extracting iron ore. A public debate is underway in Tanzania, with the media and the government both expressing concern at the relatively small share of mining profits that currently stay in the country, and negotiations are taking place with a number of mining companies.

It is clear that developing countries are not prepared to assume that past agreements are cast in stone, given the changes that are taking place in the world economy. The international community, already supporting aid and debt relief, should also support developing countries' efforts to keep more revenues from their own natural resources in their countries.

Government policy and natural resource extraction in developing countries

Developing-country government policy on extractive industries has been formed by two main strands of thought in development policy. The first was the pressure to reduce the state's role in the economy during the 1980s and 1990s, which saw the privatisation of state interests in extractives, and the deregulation of private activities in the sector. This happened mainly in non-fuel minerals; the few countries have privatised their oil and gas sectors. The second was the focus on increasing FDI as a key source of funds for development, and the assumptions about the policies required to create an environment likely to attract investors. These included low taxes, minimum requirements on investors to employ local staff or otherwise contribute to the economy, and unrestricted rights to remit profits abroad.

Trends in government policy toward the extractive sector

With the enthusiastic support of the World Bank, the general trend in the 1980s and 1990s was towards greater liberalisation of the extractive sector. In Africa alone, 35 countries produced new mining laws during these two decades.[38] In every case, the laws led to fewer restrictions on foreign investors and lower tax and royalty rates for companies. In Zambia, the Philippines and Bolivia, new laws reduced the taxes paid by companies, the controls on financial flows and other restrictions. In Ghana, royalty rates were halved and capital allowances almost quadrupled, from 20 per cent to 75 per cent. In South Africa, the standard rate of corporate tax was reduced from 35 to 30 per cent.

Very few, if any, companies involved in natural resource extraction in developing countries are actually paying the statutory rate of corporate tax. The various incentives and allowances provided often result in an actual tax rate that can approach zero, as it does in Zambia. According to PWC, this contrasts with an average corporate tax rate in the mining sector as a whole – including in the developed world where the ore is processed – of 27 per cent.[39] PWC also estimates that royalties and other indirect taxes add 40 per cent to this figure,[40] bringing the average tax take by governments from

The extractive industries transparency initiative

In response to concerns about how much companies were paying to governments, and the extent of corruption in governments receiving revenue from the extractive industries, there has been a series of campaigns and initiatives to encourage companies to be open about the payments they make to governments. As well as allowing a country's population to monitor the benefits of extractive industries, this would enable civil society organisations to uncover any corruption in the use of revenues from extractive industries. The Publish What you Pay (PWYP) coalition is a group of non-governmental organisations (NGOs) calling for the mandatory disclosure of all payments made by extractive companies to governments, and for governments to publish details of what they receive.

In response to calls from international coalitions such as PWYP, and growing concerns from several governments, the extractive industries transparency initiative (EITI) was launched in 2002. Companies, governments, NGOs and investors are all involved, and the World Bank provides both technical and financial support. Twenty-one governments are now members of the EITI, but only two (Azerbaijan and Nigeria) have published fully audited reports on financial flows between government and companies.[37] For voluntary agreements such as the EITI to work, it is essential that they are properly monitored. However, these agreements can never substitute proper international deals on transparency and accounting standards.

mining enterprises to something approaching 38 per cent. This is higher than the rate paid by companies in any of the countries in this study.

Increasingly generous tax regimes were just a part of a general trend towards economic liberalisation that would allow companies more latitude in their operations, driven partly by the World Bank and IMF's imposition of structural adjustment regimes in most developing countries. Other policies included liberalising financial flows, which reduced the requirements for companies to retain profits in the country of operation and liberalising trade regimes, which allowed companies to import and export products without paying duties. Between 1991 and 2002, 95 per cent of changes to investment regimes globally were designed to attract FDI by deregulating economies or reducing direct obligations on businesses.[41]

There is a growing literature which questions whether offering incentives to business is worth the loss of revenue that it implies. A study by global consulting firm McKinsey concludes that incentives are often ineffective, and argues that while FDI brings significant benefits such as employment and technology, 'popular incentives, such as tax holidays, subsidised financing or free land, serve only to detract value from those investments that would likely be made in any case'.[42] Certainly, some developing countries which do not offer incentives do not suffer a shortage of investment. To take just one example, PWC says that, 'Botswana is regarded as a prime African mining investment country but does not have a particularly favourable tax regime.'[43]

The World Bank and extractive-industry policy in developing countries

The World Bank is closely involved in the extractive sector in many developing countries, through its policy advice to governments, the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA), bodies that provide credits and guarantees to private sector investors.

Policy advice to governments is based on the assumption that extractive enterprises should be privately run, with the state as regulator and administrator. The role of the World Bank is therefore to assist governments with privatisation programmes, and with developing the necessary institutional capacity to regulate. They have been involved in advising more than 100 developing countries on policy reforms in the extractive sector.[44]

Through the IFC, the World Bank is also involved in investing in private-sector natural-resource extraction projects in developing countries, and through the MIGA it is involved in guaranteeing private-sector investment projects. These funds can be crucial – for example, a World Bank document says that Ashanti Goldfields in Ghana, whose majority owner is AngloGold Ashanti, the second largest gold mining company in the world, attributed its success during the 1990s 'in part… to the financial support from the IFC'.[45] All three arms of the World Bank also provide advice to governments on how to attract private sector investment.[46]

Rather worryingly for an institution that is supposed to be about development, an independent evaluation found that 'project funding in the extractive industries has not had poverty reduction as its main goal or outcome.'[47] Rather, the aim is to 'stimulate economic development through increased private sector involvement in the mining sector', presumably in the hope that once investment comes, poverty reduction will surely follow.[48] While it may be legitimate to look for growth of the economy as a whole to reduce poverty, this does not seem to have happened in the case of the extractive industries. The same evaluation found that 'increased investments have not necessarily helped the poor.'[49]

The difficulty is clear in the evaluation of assistance to Ghana's extractive industries sector. The World Bank's evaluation document notes that the contribution of mining to Ghana's economy is 'not impressive', but still rates its own contribution to Ghana's mining sector as 'substantial' because of its success in attracting new investment. Mining seems not to have led to growth, let alone to poverty reduction. Its impact on poverty is not even considered.[50]

A key role for the World Bank is advising governments on how to attract and benefit from foreign investment. Unfortunately, the World Bank itself is somewhat contradictory on this issue. In 1999, a tax advisor to the IFC said unequivocally:

> In our experience advising dozens of developing and transitional economies over the last 14 years, most incentive schemes that we encounter in most countries are simply not effective. They attract very little additional investment… There is nothing more sad in this business than a very poor country, with almost nothing that will attract FDI beyond a few rent-generating niches, ready to allow any foreign investor to pay little or no taxes in the hope of attracting more FDI. The result in this situation is that almost all the investment that does come, comes to the rent-generating

> niches for which investors would not have been deterred by a reasonable tax burden. The incentives generate almost no additional FDI and are mostly a dead loss to the treasury.[51]

Other World Bank studies support the view that tax incentives make little difference to investment decisions. An independent evaluation of World Bank activities in the extractive industries produced in 2003 recommended that, instead of advising governments to slash taxes, the World Bank should help governments to negotiate deals that 'maximise the benefits retained in the country'.[52] At Christian Aid we would strongly welcome this change in direction.

However, the World Bank does not seem to be heeding the advice of its experts or the independent review. Zambia is a country which fits the description of the poor country with 'a few rent-generating niches' – in this case copper. In 2004, advising the Zambian government on its tax regime, which includes very generous incentives to mining companies, the World Bank's Foreign Investment Advisory Service (FIAS) recommended that Zambia retain its incentive scheme. The only change it recommended was to end the practice of giving preferential VAT rates to firms sourcing local services. In other words, the World Bank contradicted the advice of its own expert on incentives, advising the government to remove a marginal incentive for companies to use local firms, which would increase local benefits from mining.[53]

Conclusion

Commodity price rises could be good news for exporting countries. If the benefits are fairly shared, price rises could benefit both the companies and the countries where resources are extracted. This already happens in a number of cases, and many countries are trying to renegotiate with companies to get a better share. Until now institutions like the World Bank have advised countries – against an increasing body of evidence – to lower taxes to attract investment. The evidence presented here, and in the case studies which follow, show that the policy of reducing taxes in order to attract investment, under the assumption that benefits from such investment will flow back to the host country in other ways, is deeply flawed in the case of extractive industries.

Many developing countries are trying to renegotiate the terms of the deals they have made with companies, in order to get a bigger share of the profits from resources extracted from their territories. Rather than trying to dissuade them from this task, the international community should support developing countries as they try to harness this key source of revenue – which can and should be used for development in the countries where the resources come from. As a first step, there is an urgent need for internationally agreed standards on company reporting and accountancy to reduce the opportunities for transfer pricing abuse on the part of companies and corruption on the part of governments.

Bolivia

Oil and gas – pre-privatisation

Bolivia has the second largest oil and gas reserves in South America, after Venezuela. The Standard Oil Company of New Jersey was involved in drilling in Bolivia in the 1920s, but in 1936 the Bolivian government revoked its concessions. At the same time, the state created a national petroleum company, Yacimientos Petrolíferos Fiscales Bolivianos (YPFB), to manage the country's oil and gas reserves. For 60 years, YPFB was a fundamental pillar of the country's economy – generating important resources for the Bolivian treasury – until oil and gas extraction were privatised in 1996. When Bolivia entered financial crisis and hyperinflation in the 80s, the government introduced a policy to ensure that YPFB transferred 65 per cent of its income to the treasury. Between 1985 and 1996 revenue from YPFB constituted the state's primary source of income.[1] This was seen as a temporary measure, but it took its toll on YPFB, which was unable to use its own capital to invest in exploration, increase production or improve transport and distribution of oil and gas products to new markets.

Privatisation of oil and gas extraction

Like many other developing countries, Bolivia was required to privatise a number of state-owned companies – including YPFB – as a condition of loans from the World Bank and IMF in the 1990s. The privatisation of YPFB took place in 1996, amid considerable public disquiet. As part of the attempt to sell privatisation to the public, the government promised that half of the shares in the new companies would go into a 'capitalisation fund', which would be invested and used to provide dividends on retirement to all Bolivians who were aged 21 by 31 December 1995.

YPFB was split into three companies – Chaco, Andina and Transredes – which were duly sold off. There was much speculation that the companies had been seriously undervalued. The popular phrase applied at the time was that the government was selling off its assets for the price of una gallina muerta – a dead chicken.[2]

The government did not get any direct benefit from the sale. Instead of being required to pay for the 50 per cent of the shares of the companies they purchased, the new owners were allowed to invest these funds – US$834,944,022 in total – in oil and gas exploration and production. It took Chaco and Andina four years, and Transredes three years, to spend this investment subsidy.[3] At the same time as using the investment subsidy, they were also able to claim this amount as costs, which of course lowered their tax burden.

The purchasers were all foreign-owned companies. The leading companies involved in oil and gas extraction in Bolivia today include the Brazilian state-owned enterprise Petrobras, whose share of Bolivia's natural gas reserves grew from 33 per cent in 2000 to 45 per cent in 2005. It is followed by Total Exploration and Maxus (Repsol).[4] According to 2005 figures, the same three companies dominate in Bolivian oil extraction – Petrobras, followed by Maxus (Repsol) and Total Exploration. [5] British companies BP and BG Group have smaller shares of the market – BP had three per cent of natural gas production and five per cent of oil production in 2005, while BG Group had seven per cent of gas production and six per cent of oil production.[6]

Since privatisation – and particularly in the last few years – there has been a heated public debate in Bolivia about whether the country benefited from the privatisation and subsequent investment in oil and gas production. Here we attempt to work out the actual contribution foreign investment in the oil and gas sector makes to the Bolivian economy, comparing a six-year post-privatisation period (1999-2004) to the six years running up to privatisation (1991-1996).

We chose to study the period of 1999 to 2004 because complete data was available and it excludes the initial period immediately after privatisation when new investment was beginning to flow into the country and benefits were likely to be more limited. We compare the benefits that have been brought about by privatisation with the costs of Bolivia's privatisation policy. These include direct costs, such as subsidies paid and the revenue that Bolivia has foregone – for example, by providing tax incentives – to attract foreign investment to the country. We then used these calculations to draw up a balance sheet for oil and gas extraction in Bolivia.

The impact of privatisation and oil price rises

Investment and production

Levels of investment have increased steadily – by an average of US$374 million a year – in the nine years since privatisation.

The oil and gas sector is of growing importance to Bolivia's national economy, contributions growing from 1.91 per cent of GDP in 1998 to 5.92 per cent 2004.[7] The growth rate of the oil and gas industry (23.76 per cent) also far exceeded the growth rate for Bolivia's GDP in 2004 (3.58 per cent).[8]

Total exports of natural gas grew by a staggering 2,762 per cent in value and 854 per cent in volume between 1999 and 2005.

At the current rate of extraction – and presuming no new reserves are found – Bolivia's natural gas reserves will last for another 110 years and its oil reserves for 71 years.

Employment

According to the most recent study available, 6,000 workers were employed by the oil and gas sectors in 2000 – that is 1.4 per cent of total employment in Bolivia.[9] These workers tend to be highly skilled – either technical (engineers) or professional (accountants, lawyers, general managers) staff and most of them are Bolivian nationals.[10] The limited number of jobs created is acknowledged in the industry – for example, the general manager of the Bolivian Chamber of Hydrocarbons (the industry association) told us: 'The industry does not create jobs, it creates wealth.'[11]

Although the sector does not employ large numbers of people, it does pay the highest wages in the country, averaging US$1,378 per month between 1999 and 2004.[12] Assuming that levels of employment have stayed roughly constant, the total wage benefit for skilled workers between 1999 and 2004 is around US$775,980,000, which represents some 17 per cent of the companies' total turnover in that period.

Linkages

While in general the extractive industries have a poor record of providing opportunities for local firms, in Bolivia local companies seem to have made some gains from the presence of new investors in oil and gas. According to the Bolvian Chamber of Hydrocarbons, 75 per cent of the 105 business members (79 firms, including some quite large companies) are Bolivian. Although drilling services are all contracted to multinationals, national companies are heavily involved in all other jobs, providing technical services such as pipeline and road construction, fitting out platforms, pipeline maintenance and equipment repair. While these are important services, they provide local firms with few opportunities for high value-added activities.

Many of the Bolivian companies involved in this sector are now selling their services to multinational oil and gas companies in other Latin American countries. There are also a number of small- and medium-sized firms operating. One of the most notable supplier success stories is of a small Bolivian firm which has developed sophisticated software called 'gas to market' among other software packages for upstream companies.

The Bolivian Chamber of Hydrocarbons has also promoted the creation of an online marketplace where oil and gas firms can set up relationships and buy from local suppliers. There are 1,800 suppliers listed on the service. These include the more specialised technical service providers described above and a large variety of the suppliers which oil and gas firms use regularly – for example, those providing stationery products, tyres, lubricants, security and cleaning services. Most of these firms have developed post-privatisation, as YPFB operated as an integrated company with the great majority of work kept in-house.

Government revenue

Before privatisation, oil and gas revenues were a significant source of income for the government. Between 1985 and 1996, the state received the equivalent of 65 per cent of YPFB's resources, with average annual transfers of US$298.43 million between 1990 and 1996.[13] Private companies which were active in Bolivia prior to privatisation – working in association with YPFB – were also subject to a 50 per cent royalty on the value of production and corporate tax rate of 40 per cent.

This royalties and taxes regime was revised during the privatisation process. Royalties were kept at 50 per cent for existing reserves (those already in production in 1996), but dropped to 18 per cent for new reserves. Though this might have been a well-meant incentive to encourage new production, in revenue terms it seems to have backfired. Ninety-seven per cent of production in Bolivia takes place in reserves classified as new. While some of these are genuinely new reserves, they also include oil wells that had been discovered and in some cases were even in operation before the new law came in, but had not been officially certified by an international reserve-certifying body.

Corporate tax rates were set at 25 per cent. There was also an additional 25 per cent 'surtax' (the equivalent of a special petroleum tax such as that charged in countries like the UK and Norway) payable only by oil and gas companies, and only in the case of 'extraordinary' levels of profit. Companies were also to be charged a 12.5 per cent witholding tax on any profits that were repatriated. However, extremely generous allowances, including a 100-per cent capital allowance, has meant that in reality royalties form the largest proportion of contributions by oil and gas companies to the Bolivian government's Treasury.

Table 6: Total tax and royalties revenues (US$ million) from oil and gas, 1999-2004

	1999	2000	2001	2002	2003	2004	Total
Royalties	99.71	180.09	187.96	172.66	219.68	287.32	1,147.42
Taxes	6.95	8.78	23.4	8.95	12.37	30.72	91.17
Total	106.66	188.87	211.36	181.61	232.05	318.04	1,238.59

Overall, while the sector's turnover has risen by 303 per cent, the value of revenue generated in royalties and taxes for the state increased by only 198 per cent between 1999 and 2004. This indicates that the Bolivian government captured a significantly lower proportion of benefits in 2004 than it did in 1999. Had the companies paid the full 50 per cent royalty fee, rather than the special rate of 18 per cent, the government's revenue would have been considerably higher.

Table 7: Fiscal revenue (US$ million) foregone for gas, oil and LPG, 1999-2004

	1999	2000	2001	2002	2003	2004	Total
Company revenue	290. 8	508.9	594.3	586.4	820.9	1,172.2	3,973.5
% royalty received by state	34.3%	35.4%	31.6%	29.4%	26.8%	24.5%	
% royalty foregone, assuming 50% rate	15.7	14.6%	18.4%	20.6%	23.2%	25.5%	
Size of tax incentive	45.6	74.3	109.3	120.8	190.5	298.9	839.4

The total tax incentive over these six years is worth US$839 million. This is revenue the state has forfeited in order to reform the fiscal regime.

As well as payments in the form of taxes and royalties, the state received dividend payments into the capitalisation fund, set up at the time of privatisation to provide future pension benefits for citizens. According to fund managers AFP Futuro and BBVA, total payments into the fund between 1999 and 2004 were US$131 million, or 3.5 per cent of total revenue.

Cost of reform

The privatisation process in Bolivia carried with it huge costs to the country, which were mainly covered by international loans. Privatising six firms, including YPRB, was to cost Bolivia US$189 million between 1993 and 2001. In the end only five were privatised – the airline, railways, electricity, telecommunications and YPFB – though the cost remained the same. In all, 10 private firms were created from five state enterprises. Three of the new companies were in the oil and gas sector, which means that the costs of privatising oil and gas were approximately three-tenths of the country's total privatisation costs – US$57 million.

World Bank loans covered 57 per cent of the total cost of privatisation, and the Inter-American Development Bank (IDB) covered 38 per cent. A large part of these loans were used to pay consultant's bills – many of which were foreign firms brought in to advise Bolivia during the process.

Costs of fuel subsidies

In an attempt to offer an inducement to companies, while also providing affordable fuel to the population, the Bolivian government agreed to pay a subsidy on the sale of fuel in Bolivia to ensure that foreign companies were paid in line with international market prices and poor Bolivians would still have access to energy. The government buys from companies at the full international market price, but sells the fuel on at a lower price. The difference between the two prices is the subsidy – a loss the government makes on the fuel it buys from the companies to sell on internal markets. The subsidy is paid mainly on liquefied petroleum gas (LPG) and diesel. This incentive to companies has involved considerable costs for the Bolivian government, particularly as oil prices have risen on international markets.

Table 8: Amount of fuel subsidy provided by government (US$ million), 1999-2004

	1999	2000	2001	2002	2003	2004
LGP	16.52	29.28	31.79	29.3	55.57	18
Diesel	0	0	18.1	122.2	63.3	26.06
Total	16.52	29.28	49.89	151.5	118.87	44.06

Source: Calculations by CEDLA; figures from the Bolivian treasury, YPFB and the national tax service, SIN.

The government paid a total of US$410.12 million in subsidies during this six-year period. While the government may have still had to provide a fuel subsidy had the industry not been privatised, it is now paying foreign currency to third parties and cannot absorb the cost internally.

Lost revenue through tax avoidance

A key issue for any government managing the extraction of its oil and gas is to ensure that it actually receives the royalties and taxes that it is due. The oil industry is obviously extremely sophisticated and it is certainly questionable whether developing countries can easily build up their capacity to regulate and monitor in this area. According to the National Tax Service, tax evasion in Bolivia is a serious problem.

'There is a lot going on under the table. There is a high level of corruption in the form of tax evasion in Bolivia.'[15]

Although the National Tax Service may feel many practices can be classified as evasive, there are likely to be many examples where Bolivia is not receiving revenue due to sophisticated tax avoidance practices. Where the National Tax Service does suspect evasion it is of course urgent that they try to address this problem.

Christian Aid's partner CEDLA reports in 2006[16] that supply of LPG on the local market is often barely enough to meet demand, even though production figures for 2005 were actually double the internal consumption figures. As storage of LPG is limited and SIRESE, the regulatory authority, didn't authorise any LPG exports in 2005, there is a contradiction in the figures in Bolivia. This suggests the need to investigate whether there is an under-representation of sales or whether smuggling is occurring. There has not been any real investigation and the only sources of information are press reports.

Chaco (owned by BP and Bridas) got into trouble in 2004 over its exporting of light oil. The company had a permit to export 1.5 million barrels of heavy oil a year through Arica in Chile and was accused of exporting 26,000 barrels of light oil under this permit. Light oils have high gasoline content and are therefore more valuable than the normal heavy oil which Bolivia exports. The Bolivian authorities opened a case against Chaco as it suspected light oil was being exported without the correct permit and sold at a lower price than it was worth. The response of Chaco was to pay $1,063,680 to the state, though without making an admission of liability.[17]

A similar case was opened against Andina (owned by Repsol). According to press reports, Andina was accused in 2006 of not reporting the export of 230,399 barrels of oil which was valued at US$9.2 million by the Bolivian customs authority.[18] On 10 March 2006 the press also reported searches of Andina offices as the general manager and operations manager failed to show up for the case proceedings.[19] Both executives were later detained for the offence of smuggling though they were released when a higher court overruled their detention.[20] Andina vigorously denied the allegations. The case is ongoing.

It is impossible to know exactly how much tax evasion is going on. The National Tax Service has not presented any consolidated information on this issue. However, the Bolivian press did report in 2004 that the National Tax Service records showed that around 600 million bolivianos (US$75 million) were in dispute between the tax office and the oil and gas companies for alleged tax evasion.[21] As this is the only aggregated data we have, it is the only figure we can use to estimate the costs to the state of tax evasion.

Adding up the figures

As in many other developing countries, the recent debate around oil and gas companies in Bolivia has focused on the contribution the companies make to the economy versus the economic costs borne by the government, and the environmental and social costs borne by communities and individuals who live near mining areas. A useful way to judge the success of privatisation and the government's investment policies is to compare the benefits to the Bolivian government, workers and local businesses with the costs of, and the

Table 9: Analysis of the economic contribution (US$) of the oil and gas sector to Bolivia

Benefits		Costs and revenue foregone	
Wages	775,980,000	Cost of reform	56,688,390
Royalties and taxes	1,238,585,362	Initial investment incentives	834,944,022
Dividends to capitalisation fund	130,528,002	Revenue foregone through tax incentives	839,452,364
		Fuel subsidy	410,120,000
		Estimated known claims of tax evasion	75,000,000
TOTAL	2,145,093,364		2,216,204,776

revenue foregone through, privatisation and a policy to attract foreign investors. By trying to quantify some of these costs – and the revenues the government has not collected – this study has brought a new dimension to that debate. As the following analysis shows, the costs and revenue the Bolivian government has foregone in relation to the privatisation of the oil and gas sector are extremely high. It seems that the government did not secure a particularly good deal when it privatised oil and gas exploration in 1996.

There is a loss of just over US$72 million to the Bolivian economy when we include the initial costs of the privatisation reform and the ongoing areas of loss to the government over the six-year period. Some costs and benefits have not been quantified – for example, there will be benefits in the form of increased business for local companies, and costs in the form of environmental damage and social disruption. Although there are methodologies for quantifying these impacts, we have not attempted this here.

There has been a significant fall in the average annual transfer to the state between the two periods we are studying. For the six years prior to privatisation, an average of US$298.43 million was transferred to the state. For the six-year period after privatisation, this figure fell to US$206.43 million.[23]

It is important to remember that this reduction is taking place at a time of rising prices and increasing investment, production and exports. Although companies' activities are increasing, the state is receiving an increasingly smaller share of the benefits, and as extractive resources continue to deplete, the period the state may enjoy this benefit is limited. The country assumed large costs in privatising its oil and gas sector, under the expectation that investment, production and state revenue would be much higher. This analysis instead points to a significant failure. It is not a surprise that Bolivians are extremely sceptical of the benefits that foreign companies are bringing to the country.

Recent policy changes and political pressure

After two years of demonstrations and protests which became known as the 'gas wars', the Bolivian government brought in a new hydrocarbons law in May 2005. The new law changed the tax and royalties regimes in two main ways:

- All reserves are now subject to the 18 per cent royalty rate which was previously applied to new reserves only.
- There is a new 32 per cent tax on hydrocarbons, called the IDH. This is a direct tax on the value of all oil and gas production. It essentially operates like a royalty payment, but is formulated as a tax because the contracts with foreign investors forbid the government from changing the royalty payments due.

The initial payment due on the value of production therefore became 50 per cent (18 per cent royalty and 32 per cent IDH). The application of the IDH from May 2005 has raised US$278,777,317 in taxes – a huge increase on the US$30.7 million the state received in tax from the same companies in 2004.[24]

This move by Bolivia to increase the taxes on oil and gas companies has not been well received by the international community or by gas and oil companies. The IMF made it clear that it would not sign a new 'standby' agreement with Bolivia, which gives the green light to other creditors to lend to the country, unless the Morales government 'adjusts' the law, particularly addressing the IDH.[25]

The US also expressed its concern over the new hydrocarbons law. The former US ambassador to Bolivia, David Greenlee, has made clear that a revision of the hydrocarbons regime – particularly moves towards nationalisation – would carry 'serious problems' for the country and would 'have consequences'.[26] Bolivia's revision of its management of the oil and gas sector is the main reason that it has not been allowed to enter into trade negotiations with the US alongside Peru, Colombia and Ecuador.

Since the new hydrocarbons law was passed in May 2005, the companies paid the increased tax but included a declaration with each payment stating that they felt this payment was illegal and that they were expecting reparations in the future. At least seven of the oil and gas companies presented the Bolivian government with letters questioning the legality of the new law in the framework of the bilateral investment treaties that provide various forms of protection for the interests of foreign investors. These companies were BG Group (UK), Total (France), Repsol-YPF (Spain), Pan American Energy (in which BP has an interest), Vintage (USA), Exxon-Mobil (USA) and Pluspetrol (Argentina).

The controversy did not end there. When the Morales government started the most recent reform to the sector on 1 May 2006, a renegotiation of contracts became inevitable. In May the government brought in a further change to the fiscal regime, applying a temporary supplementary tax of 32 per cent to be paid on the two largest fields, San Antonio and San Alberto. This was to be paid for 180 days while the government carried out audits and restructured the management of the sector. New contracts were signed by the Bolivian government

and foreign investors in the oil and gas sector in November 2006. Under the new agreements, YPFB is directly involved in the supply chain receiving the goods and selling them on. From the proceeds of sale, 50 per cent goes directly to the government (as has been the case since May 2005). From the remaining 50 per cent companies are able to claim a maximum of 30 per cent as costs and the remaining 10 per cent profits are then split between companies and the state. The profit split is variable depending on the volume and value of sale. This means the government is likely to take around a 60 per cent share of the wealth generated by the oil and gas sector under the new contracts – a significant rise from their 25 per cent share in 2004. Their share should also go up in time as investment costs are recouped and profits increase.

All the companies present signed up to the new contracts and agreed to these new terms, with not a single company leaving the country. There is clearly an acceptance that profit can still be made for private investors under this new regime. However, it is still not possible to predict the amount of new investment Bolivia will receive in the future from current or new investors. As stated by the BG Group:

'It remains to be seen whether further investment BG, or indeed other investors, will be possible in the future in Bolivia.'[27]

However, there is still optimism that Bolivia's reforms have provided a foundation that will give the state a more equitable share in the wealth created. Hopefully this is a new opportunity that will ensure the Bolivian people have a chance to truly benefit from the wealth created from their oil and gas reserves.

Zambia

According to the World Bank, 64 per cent of the population of Zambia live on less than one dollar a day.[1] Almost one in five children die before their fifth birthday. However, the country's copper mines are an increasingly valuable asset: the price of copper has been rising at unprecedented levels since 2003, and in 2006 it was hovering at around five times the average 2002 price.[2]

The question for the Zambian government is whether it will be able to use the huge profits to be made from copper mining, allowing it to deal with the enormous social and economic problems the country faces today. Our evidence shows that government revenues from copper are tiny compared with the value of the copper extracted from Zambia's mines, and that it needs a much bigger share of the revenue if copper is to contribute to development. However, the government has signed away its rights to do that by entering into 20-year agreements with the mining companies that prohibit any changes in tax or royalty rates.

Copper mining to 1997

Copper has been mined commercially in Zambia since 1928. In 2005, Zambia was the world's tenth largest producer of copper, mining 435,500 metric tonnes each year.[3]

Thanks in part to copper mining and high international prices, post-independence Zambia enjoyed a boom period, with a GDP in 1969 that was higher than Brazil's or South Korea's. Following concerns about the low rate of investment by mining companies, and in tune with the prevailing economic orthodoxy among newly-independent African states at the time, the Zambian government nationalised its mines in 1969. Although the government had a controlling interest, Anglo-American continued to hold a 27.3 per cent minority share.

While copper prices remained high in the early 1970s, the nationalised copper mines continued to provide up to two-thirds of total government revenue, as well as services for the communities living around the Copperbelt. However, this economic dependence on copper revenues proved disastrous when the price of copper began to fall in the mid-1970s, and Zambia's economy went into a sharp decline.

Income per person fell by 50 per cent between 1974 to 1994. The fall in copper revenues was an important reason for this decline, though there were other contributing factors. Although the government was still earning revenues from the nationalised copper company, there was little new investment. No new mines opened up after 1979, and given the increasing cost of production in existing mines, Zambian production collapsed from 700,000 tonnes in 1969 to 250,000 tonnes in 2000. By contrast, global production and consumption of copper doubled in this same period.[4]

1997: privatisation of the copper mines

As early as 1993, Zambia's second Privatisation and Industrial Reform Credit (PIRC II) from the World Bank required that the government study options for privatising the state-owned Zambian Consolidated Copper Mines (ZCCM). A German company, Kienbaum Development Services (GmbH), was contracted to assess the options and reported in April 1994, recommending that ZCCM be unbundled into five separate units. By 1995 the World Bank and IMF had both extended loans to Zambia with the condition that it adopt and implement plans within this framework. The World Bank repeated this demand in 1996 and 1999; the IMF repeated it in 1999.

In 1996, privatisation became a condition of Zambia's debt relief under the HIPC (heavily indebted poor countries) initiative, and the process finally got under way. ZCCM was broken up into seven companies (six mines and associated companies and one smelter) and sold off as separate units. The privatisation raised a total of US$627 million.[5] The largest mine, sold as Mopani copper mine, was bought by two Canadian companies. Konkola, the next largest, went to Anglo-American, with additional investment from the World Bank's investment arm, the IFC, and the UK government's Commonwealth Development Corporation. Put off by low copper prices, Anglo pulled out of Zambia in 2002, returning ownership of the mine to the Zambian state, just before the price of copper began its rapid rise. In 2004, a 51 per cent stake in Konkola was bought by Vedanta, the world's largest copper company, which is listed in London and controlled by Indian steel multibillionaire Anil Agarwal. Other mines are owned by companies from China, Canada, South Africa and Switzerland.

The deal between the government and investing companies

Two key pieces of legislation shaped the relationship between the government and investing companies during and after privatisation. The first – the 1995 Investment Act – was designed to reassure potential investors by providing guarantees against nationalisation and permitting the remittance of profits from the country. It also provided various incentives to investors in a number of different sectors in the form of reduced tax rates or generous allowances for capital expenditure. The combined effect of these incentives is that, according to the World Bank's Doing Business database, the total tax rate on business in

Zambia (averaged across different sectors with different tax rates) is 22.2 per cent: it is seventh-lowest total tax rate on business in the world.[6]

The second piece of legislation – the 1995 Mines and Minerals Act – provided the mining industry with special incentives. The Act sets out general government policy on the obligations of investors and government in the mining sector, but leaves many issues to be resolved in private deals between individual companies and government. The Act sets the general royalty rate at three per cent, with provision for lower rates if negotiated individually. It also provides for the possibility of writing off investments against tax and relief from customs duties, but the actual value of these incentives are left to individual negotiations.

The mining companies themselves were instrumental in designing the mining act. According to Lennard Nkhata, the permanent secretary of the department of minerals and mining:

> The private sector wanted concessions so that when they take over these assets they would be able to recapitalise these assets and, at the end of the day, make these mines profitable. So in the Mining Act you find provision for these concessions. The companies were looking for a situation where they would be profitable, so they wanted to drive certain taxes down. And this is how we came up with very low mineral royalties. Today I think we are the lowest in the whole of Africa at 0.6 per cent of gross turnover for mineral royalties. This is how, over the period, we have pegged the company tax at 25 per cent for the mining sector, compared to manufacturing companies which are at 35 per cent. And then on imports of capital equipment, these things are brought in duty-free if they are brought in for mining operations and for exploration work in mining. Not only that; we have made many items tax deductible when you come to income tax calculations. So capital investment is tax deductible and the interest that you pay on loans is also tax deductible. So the whole package is very, very attractive.[7]

The two acts were in the end just a backdrop for the negotiations with individual companies, which actually set the detailed terms for their contribution to Zambia's

Table 10: Incentives given to the various mining companies in their respective development agreements

Company (owners) / year of agreement	Royalty tax rate	Provision for capital investment deductions	Corporate tax rate	Provision of carry-over losses	Customs duty	VAT	Foreign currency retention	Withholding tax	Stability period
Konkola Copper Mines (KCM) (Vendanta/ ZCCM-IH) 2000	0.6	100%	25%	can carry forward losses	exempt (excise duty on power: 0%)	refund on net input VAT (0%)	100%	on dividends: 0%	20 years
Mopani Copper Mines (Glencore, First Quantum and others) 2000	0.6	100%	25%	as above	as above	as above	100%	on dividends: 0%; after stability period: 10%	20 years
Chambishi Mining NFC (Africa Ltd) 1998	2.0	100%	35%	as above	as above, and no customs duties on personal effects	as above	100%	0%	15 years
Chambishi Metals (First Quantum) 1998	2.0	100%	35%	as above	exempt on machinery and equipment; excise duty on power: 10%	as above	100%	0%	15 years

Source: Development agreements between the government of Zambia and respective companies, all available at: http://zambianmining.blogspot.com

economy. Between 1997 and 2000, the government and mining companies negotiated these agreements without any involvement from trade unions, parliament, affected communities or other stakeholders, setting out the terms under which the mines were sold, and the subsequent rights and responsibilities of both companies and governments. Although the agreements are not in the public domain, we have for the first time seen copies of four of them.

One key feature of the development agreements, as these agreements between individual companies and government are called, is that they are legally binding and cannot be changed for up to 20 years.

The agreements that we have seen offer mining companies even more generous terms than those included in the 1995 Mining Act. The royalty rate has been negotiated down from the three per cent in the Mining Act to 0.6 per cent of the gross value of production. This is very low by the standards of Zambia's neighbours. An IMF survey of tax and royalty rates in developing countries found that no other African country charged royalties at a rate below two per cent – indeed, some royalties are as high as 20 per cent.[8]

As is common for industries with high up-front investment costs, the companies are also allowed to carry forward losses – meaning that losses made in one year can be subtracted from profits made in subsequent years and thus reduce the tax payable on those profits. Companies can also deduct all capital expenditure from profits and further reduce taxes. They are exempt from customs duties and all other taxes on machinery or equipment, and can reclaim all VAT paid in Zambia, further reducing their tax liabilities. The World Bank's own 2004 study of Zambia's tax regime in different sectors of the economy estimated that Zambian mining companies enjoy a marginal tax rate of zero.[9] By comparison, local small enterprises in Zambia face a tax burden of between 20 and 25 per cent.

The table summarises the main tax incentives that are provided for in the development agreements obtained by Christian Aid.

The agreements provide other incentives for companies. For example, they are not responsible for environmental liabilities such as slag heaps built up by the state-owned enterprises, and they enjoy a higher permitted level of pollution than ZCCM had. In effect, the government is subsidising the companies by dealing with their environmental problems.

The Zambian government itself seems far from certain that it got a good deal from the development agreements. Asked whether state negotiators would adopt the same approach to negotiating development agreements if they could go through the process again, the permanent secretary of the ministry of mines and minerals development commented:

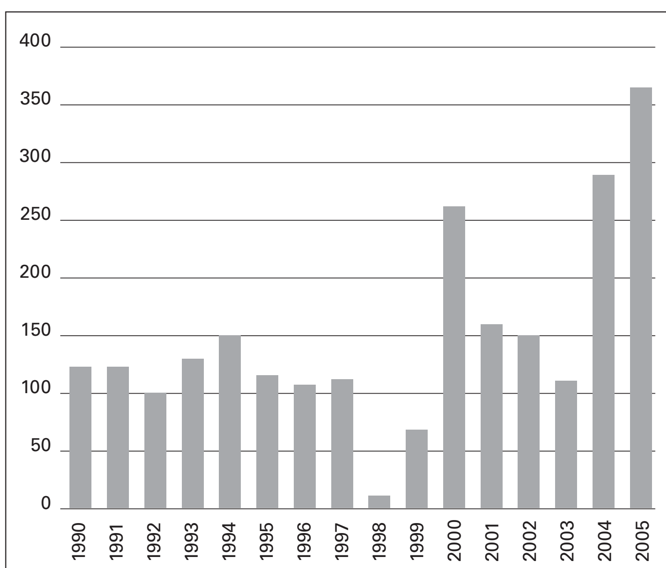
We would do it differently. There were a large number of people who were being laid off in the process of privatisation to the extent that the general public felt like, what was in it for them in the privatisation? It was like foreigners were just coming over to take over and run and get fat cheques while the local people were thrown into unemployment and they were not seeing anything coming on.[10]

The impact of privatisation and higher copper prices

Investment and production

In the first few years after privatisation, investment did not increase significantly. Average annual investment in the seven years before privatisation (1990-1996) was US$125 million. In the seven years after privatisation, it rose slightly to US$135 million. Investment did not increase in a significant and sustained way until 2003-04, when copper prices began their dramatic rise. By 2005, companies were investing US$350 million.

Figure 11: Total capital investment (in US$ millions) in the Zambian mining industry, 1990-2005



Source: Chamber of Mines 2006 [11]

In 2005, copper production also exceeded 450,000 tonnes for the first time since the 1980s. The mining companies are planning new investments, which they say should take Zambia's copper production to an all-time high of 800,000 tonnes. At this rate of extraction, most of the existing mines would only last another 15-30 years, although if new mines were opened, Zambia's copper reserves might last for more than 100 years.

The new investors are now making significant profits. First Quantum, part-owner of Mopani copper mine, reported net earnings of US$4.6 million in 2003, rising to US$152.8 million in 2005. Similarly, KCM's operating profit increased from US$52.7 million in 2005 to US$206.3 million in 2006.[13]

As yet, these profits have not been reflected in increased government revenue from mining. In his budget speech in February 2006, the minister of finance estimated that the government was likely to receive less than US$11 million from royalty payments in 2006 – that's 0.1 per cent of the value of production in 2005.[14]

Employment

Privatisation has seen a change in working conditions for mining employees in Zambia. At the time of privatisation, about 31,000 people worked in the mines – most of them on permanent contracts. Between 1997 and 2004, employment in the sector fell by a third to just over 19,000. Since then, employment has risen again, but on very different terms. Interviews conducted with mine managers for Christian Aid indicate that there are around 21,000 workers on pensionable contracts at the mining houses, another 16,000 employed indirectly via contracting firms and at least 1,900 employed by the mining companies on either fixed-term contracts or as seasonal or casual labour. While on average just over half of all those working in the mines are on permanent contracts with the mining houses, Chambishi Mines (owned by Chinese state enterprise NFCA) operates a highly unusual system: of 2,200 workers, only 52 have permanent contracts.

Wage rates in the mines vary considerably. According to figures supplied by the Zambian Union of Mineworkers (ZUM), the lowest monthly wages are around 540,000 kwacha (some US$130) and the highest are just under three million (about US$730). A large number of miners are paid below the 1,500,000 kwacha (US$360) that is required to meet a family's basic food needs for a month. Based on data from the ZUM, the average pay for permanent workers in 2005 was around 1.67 million kwacha (US$410), and for contractors about 700,000 kwacha (US$170). This implies that mining companies paid a monthly total of just under US$10.5 million in wages, or US$125 million a year – which is less than eight per cent of the value of copper production for the year.

Personal income tax in Zambia is charged at between 30 and 40 per cent. The total contribution of mining wages to government revenues is therefore around US$43 million, assuming a median tax rate of 35 per cent on all income (this is an overestimate since it does not subtract tax-free allowances, which were US$730 per year in 2004).[15]

Linkages to local businesses

Before privatisation, the mines had a deliberate strategy of supporting local businesses. A number of industries sprung up in the areas around the mines to support various activities. Since privatisation, many of these businesses have found that the new mine owners are less interested in buying from Zambian firms.

Eddie Kapungulya, chair of the Kitwe and District Chamber of Commerce and Industry, described the situation in one mining area:

> All the people who were supplying, lost. [The new mine owners] started afresh and it was with a view to create deliberate confusion so that they could benefit at the end of the day, not just by lowering costs but by the managers themselves getting the contracts. So the manufacturing sector was destroyed. People who used to manufacture for the mines could no longer manufacture because these guys were now buying from South Africa and from all over the place and disregarding the people who were already there… Though the new mine owners are from different countries, there is one approach in common – that they would prefer to buy goods from firms based in their home countries. So when you hear that they have invested US$500million, the net effect on the local economy is virtually zero.[16]

Benefits to local communities

Before privatisation, the Zambian copper company fulfilled a number of social responsibilities, maintaining the infrastructure of towns in the Copperbelt, and providing health and education services to the population. The sharing out of these responsibilities post-privatisation is itemised in some detail in the development agreements. Some divisions of ZCCM were associated with particular schools, hospitals, women's groups

or sports clubs, or had responsibility for particular stretches of road. In these cases, the agreements tend to either transfer these responsibilities – along with monitoring mechanisms to ensure prices and standards are maintained – to the new companies, or else they specify how labour and costs for maintaining the systems will be divided between the company, the local authority and service users.

Those mining companies that still run health and education services for employees and their dependents are now in the minority. This would not necessarily be of concern if the government or other agencies had filled the gap left by the mining companies. However, this does not seem to be happening. At the time of privatisation, a number of hospitals and clinics managed by the mines were closed down. Others were handed over to the government via the District Health Management Boards (DHMBs) or to NGOs.

Typically, these facilities are now running on significantly lower budgets and have a somewhat hand-to-mouth existence, depending on charitable and aid donor handouts. The three clinics that Chibuluma Mining handed over to DHMBs in Kalulushi Township have since closed down. However, there are signs that some companies are reconsidering their approach to service provision, at least for HIV. Since 2002, the two biggest private companies, KCM and MCM, have both adopted comprehensive policies and programmes for HIV and AIDS.

Nevertheless, while companies are starting to face their responsibilities to the current workforce, they have been slower to implement commitments they made to provide for previous generations of mineworkers. In the development agreements, the companies accepted a commitment to provide for retired workers, though many have failed to fulfil these responsibilities and refuse to admit to their workers that such agreements exist.

The following clause from the MCM development agreement is reproduced almost word for word in most of the agreements:

> The Company shall: ensure that the Medical Services are accessible to all employees of the Company… and Registered Dependents of such employees or persons (including for the avoidance of doubt, such of those persons to whom access to the Medical Services is granted by virtue of relevant redundancy or retirement provisions)… ensure that the Medical Services are provided to such persons… at least to the same standard (as to range and quality of service) as currently available at the date of this Agreement.[17]

It is clear that the mining companies are not sticking to the letter of these agreements. Former MCM employees with work-related health problems currently receive a 50 per cent discount on public fees for life. Those on medical discharge, early or normal retirement get 50 per cent for five years. Those made redundant get 50 per cent for one year. Under ZCCM, employees who retired on medical grounds got free medical support for life, while others got free health care for five years from their date of retirement.

Government revenue

The government has received very limited revenues from mining. According to the World Bank's 2004 report on taxation in Zambia, mining companies contribute only around 12 per cent of all corporate tax revenues,[18] despite accounting for nearly 70 per cent of export revenues.[19]

It is also clear that mining companies are not paying 0.6 per cent of their production value in royalties to the government. The development agreements seen by Christian Aid include a certain amount of leeway in the payment of royalties and exemptions in the first five years of operations – for example, when a mine has a zero 'cash operating margin'. It seems clear that the 0.6 per cent figure is itself negotiable and companies can avoid it to some extent.

Table 12: Total tax and royalties paid and value of production of copper (US$)

	2002	2003	2004
Royalties	696,540	2,112,825	209,249
Taxes	7,433,480	6,029,157	8,058,590
Total revenue from mining companies	8,130,020	8,141,982	8,267,839
Value of production	526,238,020	598,416,624	1,089,954,240
Royalties as % of production	0.1	0.4	0.02
Tax as % of production	1.4	1.0	0.7
Total revenue as % of production value	1.5	1.4	0.7

Sources: tax contribution calculated as 11.6 per cent of total corporate tax take (figures from Bank of Zambia following FIAS 2003); royalty figures from Bank of Zambia; production values from yearly total production multiplied by average export price of Zambian copper as reported by the IMF (www.imf.org/external/pubs/ft/scr/2006/cr0639.pdf)

These figures contrast sharply with the pre-privatisation situation. According to the Zambian Chamber of Mines, the mining industry's total contribution to the Zambian treasury in 1992 was more than US$200 million.[20] The average copper price in 1992 was US$2,280 a tonne, and Zambia produced over 400,000 tonnes. Contrast that with 2004. The copper price had risen to US$2,868 a tonne, Zambia again produced just over 400,000 tonnes, but government revenues from mining were only slightly more than US$8 million. The new companies' contribution to the treasury is dramatically lower than ZCCM's used to be. Even if we take a generous view of the contribution made by companies post-privatisation, adding the taxes paid by employees to corporate taxes and royalties, the total is still only US$51 million – well below the US$200 million the government received in 1992.

By agreeing to tax exemptions and a reduced royalty rate (and by allowing further reductions to that royalty rate), the government has effectively deprived itself of a huge amount of revenue. In order to estimate what the revenue could have been under a different system, we have calculated what the government's take would have been under different possible royalties regimes. Although both tax and royalties paid to the government are extremely low, the reduction in tax revenue can be partly explained by the capital allowances granted to relatively recent investments. However, the royalties rates should be constant whatever the recent costs incurred, so the very low level of royalties paid is a more serious indication of problems with collecting revenue from companies. For this reason, our calculations only consider revenue foregone from royalty payments.

Table 13 shows the royalties that the Zambian government has foregone. Production values are based on figures for the volume of copper production from the International Copper Study Group – an intergovernmental group of copper-producing countries – and the export value of copper from Zambia provided by the IMF. They are therefore likely to be accurate.

If royalties of three per cent of the value of actual production had been paid over the three years, the total take would have been more than US$66 million for this period: that's US$63 million more than was actually collected. In just three years, the government has lost the equivalent of one-third of the total additional funds it needs to provide universal basic education in Zambia by 2015.[21]

Table 13: Royalties that the government of Zambia has foregone, 2002-2004

	2002	2003	2004	Total 2002-2004
Actual royalties paid	696,541	2,112,825	209,249	3,018,615
Royalties if companies paid 3% of production value	15,787,141	17,952,499	32,698,627	66,438,267
Royalties foregone	15,090,600	15,839,674	32,489,378	63,419,652

Conclusion

Zambia is in many ways an extreme case – its economy is highly dependent on mining for export revenues, and the government has committed itself to some of the world's lowest tax and royalty rates on mining. In common with many other developing countries, tax rates have become a big political issue, and the government has announced that it is going to look at increasing the contribution mining companies make to the Zambian exchequer.

The comparison of the current situation with that of the early 1990s is quite a stark one. Facing a roughly similar external environment, privatisation seems to have doubled levels of investment and slightly increased production, while reducing support to local communities and decimating the government's income from copper production to a quarter of what it earned in similar circumstances prior to privatisation.

The opposition won a majority of seats in the Copperbelt area in the 2006 elections, after making the low royalties paid by copper mines and Chinese investors' bad treatment of Zambian workers the biggest campaigning issues. President Levy Mwanawasa's re-elected government has said that they will increase the royalty rates paid by copper mining companies. However, many analysts believe that any attempt to alter the mining agreements will in all likelihood result in litigation by the companies. According to the Zambian press, at least two copper companies have indicated that they will challenge any attempt to change the terms of their contracts in the courts, on the basis that the development agreements were guaranteed for up to 20 years. In an attempt to attract investment, the Zambian government seems to have signed away its rights to take any substantial benefits from that investment.

The Philippines

'In a nutshell, our mining policy is minimum environmental and social effect, maximum contribution to the war on poverty.'

President Gloria Arroyo, 2005[1]

The Philippines is one of the world's most mineral-rich countries, spread over more than 7,200 islands. Its mines produce gold, copper, bauxite, chromite, nickel, silver, lignite and coal. It is also one of the poorest countries in Asia, with one of the highest (and increasing) levels of inequality in the region.[4] In 2000, approximately 45 per cent of the population was living on less than US$2 a day.[5]

The economy is characterised by slow growth and high levels of foreign and domestic debt. The political system features weak institutions, wide-scale corruption,[6] a coup attempt as recently as last year and a high level of human rights abuses.[7] On top of this, the country is vulnerable to natural disasters, suffering an average of ten typhoons a year, and earthquakes are common.

The potential contribution of mining to the economy is huge. The value of the Philippines' mineral reserves are estimated at US$840billion, and only 1.4 per cent of its estimated nine million hectares of possible mining land are currently covered by mining permits.[8] Yet, up to now, the majority of Filipinos have hardly seen any of this wealth. Furthermore, although it only covers a fraction of existing reserves, mining has already been associated with extremely high social and environmental costs (and has been the focus of widespread public protest).

This chapter examines the last five years in the mining sector and asks why Filipinos have seen so few benefits from the mineral industry, yet have borne so many costs. At a time when metals are being traded at their highest price in a decade, the Philippine government's promises regarding the sharing of wealth ring increasingly hollow.

Mining in the Philippines

During the 1970s and 80s the Philippines ranked among the ten leading gold and copper producers in the world. The industry began to nosedive in the mid-1980s and continued on its downward spiral throughout the 1990s. Global metal prices plummeted and the industry's heavy debt, coupled with poor infrastructure, led to falling investment in the sector. Mines continued to close and the government took over debt-ridden companies whose loans it had guaranteed.[9]

In an attempt to revitalise the sector, the government introduced the Philippine Mining Act of 1995, and put in place a number of legislative and fiscal inducements for companies.

The legal framework

The Mining Act included many of the Asian Development Bank's (ADB) recommendations regarding the provision of incentives needed to attract foreign investment. This piece of legislation had the distinction of being singled out as 'the most foreign-friendly mining policy' from among 70 countries implementing mineral-sector reforms.[10]

One of the Mining Act's key incentives to foreign investors was an alternative to the 60:40 Filipino-foreign ownership provisions that had previously been included in financial and technical assistance agreements (FTAAs).[11] For the first time, foreigners were allowed to invest in and control up to 100 per cent equity in domestic mining ventures. The Mining Act allows 100 per cent repatriation of profits and capital, and up to 50-year leases on land. In mining terms, this is considered a long-term concession and usually means that the person developing a mine has a good prospect of extracting all available resources during the time that they run it. The act grants a maximum of 81,000 hectares of land for every large-scale mineral exploration. It also grants companies privileges such as 'easement rights' that give them priority over transport and other infrastructure – often in cases when this encroaches on public or private lands. Further rights are granted for mining companies if their operations qualify as a 'special economic zone'.[12]

Most notably, the Act guarantees confidentiality of information for any investor in the sector. In exchange, the government demands a minimum capital outlay of US$50 million for every large-scale mining venture. Prospective mining companies must also carry out a comprehensive environmental impact assessment, attesting that the company will adopt environmentally and socially acceptable methods.

Public resistance against mining grew throughout the 1990s, in part as a result of a number of very high-profile environmental disasters. This culminated in a 1997 challenge to the constitutionality of the Mining Act by a number of indigenous and environmental groups in the Philippine courts. In 2004 the Supreme Court finally ruled that the Mining Act was unconstitutional, but this decision was overturned on appeal by the same court at the end of the same year.

In a further attempt to encourage new investment in mining, the government formulated the mineral action plan in 2004, which once again identified mining as a priority area for foreign investment. This was followed in 2005 by the appointment of a special government envoy to facilitate the easy entry of mining investment. The processing of mining applications – a long-winded procedure that used to take between one and three years – was cut to five months, and the environmental

compliance certificate (ECC) was now to be granted within 120 days or less. In February 2005 the government informed the global mining community that the Philippines was, once again, 'open for business'.

The fiscal framework

After the Mining Act was passed, the Philippine government committed itself to an 'equitable sharing of the benefits of mining'[13] in which the 'benefits are shared approximately at 50%:50% between the government and the contractor.' The government's 50 per cent is further divided into 50 per cent for the national government, and 50 per cent for local governments (10 per cent for the provincial government; and 20 per cent each for the municipality and host barangay).[14] However, an examination of the fiscal regime shows that the government has not given itself the tools to make the promise of 50:50 benefit-sharing a reality.

The general fiscal framework for foreign investors was established by the Omnibus Investment Code of 1987. Mining companies can avail themselves of a number of fiscal and non-fiscal incentives provided in the code. These include: exemption from taxes and duties on imported spare parts; tax credit on raw materials; additional deductions from taxable income for labour expenses; and provision for tax holidays from corporate tax payments.

The Mining Act established a specific fiscal regime for mining companies. The Philippines operates a royalty system on mining revenues. According to the Government Mines and Geosciences Bureau Office (MGB), payments to the government include royalties, 'on minerals extracted from mineral reservations previously explored by the government – five per cent of the market value of the gross output extracted or produced.'[15] In addition, at least one per cent of gross revenue should be paid to indigenous peoples if ancestral lands are to be developed for mining. However, a recent investigation by a committee of the Philippine Congress found that the mining industry 'barely pays the government any royalty'.[16]

Although the corporate tax rate in the Philippines is 32 per cent, foreign-owned mining companies do not have to pay corporate taxes from the start of the construction and development period up to end of the cost-recovery period (though this cannot be more than eight years from the start of commercial production).[17] It is, however, likely that they will declare accounting profits during this period. As is common for large-scale investments, the companies are also exempt from taxes on imports and benefit from generous allowances for capital equipment and the right to carry forward losses in one year to offset against tax in following years.

The economic significance of the mining industry: the vision

Over the last 15 years, many Philippine politicians have talked up the economic benefits of the mining sector and its potential to bring wealth and address poverty. Bureau of Mines director Horacio Morales said the government would make about US$60 million in excise taxes and US$430 million in corporate income taxes each year once the planned new mining projects come on line.[18] President Arroyo described the potential of the mining sector as constituting the 'maximum contribution to the war on poverty', while Gerard Brimo, president of Philex Mining Corporation called it 'the best example of countryside development that one can find'.[19] It has also been claimed that mining has the potential to generate more than one million jobs in the next six years, based on a much-quoted assumption that for each job created in the mining sector, between four and ten extra jobs are created in activities associated with the industry.

However, while the potential revenues and related benefits the state could generate are indeed huge, they are not yet reaching the Philippine people.

The economic significance of the mining industry: the reality

Payments to government

The mining industry's primary contribution to the economy is through the payment of taxes, including royalties and fees such as business permits it is supposed to pay. As Table 1 shows, the gross production value in mining rose from US$568.7 million in 2001 to a high of US$912.4 million in 2005. However, total payments to government during this period averaged only 4.64 per cent of gross production value – in stark contrast to the statements the Philippine government has made referring to wealth generation and wealth sharing.

Payments to local government

The government describes its national wealth-sharing scheme, provided under the Local Government Code of 1991 as 'one of the only few wealth sharing schemes of such nature in the world', with 40 per cent of national taxes flowing back to communities.[20] However, a look at the figures for 2001-2005

'I have never seen anything so systematically destructive as the mining programme in the Philippines. The environmental effects are catastrophic, as are the effects on people's livelihoods.'

Clare Short MP, September 2006[2]

shows that wealth sharing is more an aspiration than a reality. Although the production value of mining rose steadily over the period, the share going to local government plummeted to 0.19 per cent of gross production value in 2005, and 5.5 per cent of the total tax take. This is a far cry from the 'fair' share that the national government has promised.

Table 14: Taxes and royalties as a percentage of value of production (US$ million except where specified)

	2001	2002	2003	2004	2005
Gross production value in mining	568.7	681.0	757.5	770.2	912.4
Total taxes, fees and royalties from mining	20.8	26.9	27.7	60.8	35.2
Of which: taxes and fees collected by local government	4.2	3.96	4.1	5.5	1.9
Total taxes as % of value of production	3.65%	3.94%	3.65%	7.89%	3.86%

Source: adapted from Philippine Department of Environment and Natural Resources (DENR), Mining Statistics (31 May 2006)

Employment and wages

One of the much-promised benefits of the development of the mining sector is in direct and indirect employment, and the wages this brings. Indeed the government has promised one million extra jobs over the next six years, using a multiplier of four-to-six indirect jobs per single direct job created. However, in the ten years since the Mining Act was passed in 1995, employment in mining and quarrying has risen only marginally, from 107,000 to just 125,000 – which at 0.36 per cent of the entire workforce remains extremely low.[21] This is not surprising, as mining is primarily capital intensive and as historical data shows, generates few employees. It is perhaps more surprising that the government remains so optimistic about the potential for job creation in the mining industry.

If we estimate the total wages and benefits generated between 2001 and 2005 to be five times Php4.5 billion (US$92 million) – the government's estimate of approximate revenues generated in wages and benefits for 2003 – then this sum totals Php22.5 billion (US$414 million).[22] This is equivalent to 11.2 per cent of gross production value and is another example of the mining sector's light economic footprint. Furthermore, average wages paid in the sector are skewed by the high wages of a few senior specialised staff and mask the degree of extremely low wages paid within the sector and the fact that any economic benefits generated through wages are very unevenly distributed.

Linkages

One of the promised benefits of mining relates to the 'vast linkages' it generates. However, the country's metallic mining industry has very few links to manufacturing industries. The Philippines only has one smelter and refinery – the Philippine Associated Smelting and Refining Corporation (PASAR) –which smelts only a small amount of raw copper into cathodes at its Leyte plant, the majority of which is exported. The bulk of the minerals extracted are exported in their raw state, providing very little added value, little employment and only a small amount of foreign earnings.

The true costs of the mining industry

Investment in mining comes at a price. This does not just include substantial ongoing and future environmental costs, but also those incurred as a result of attracting investment in the first place, namely in the incentives offered to the industry. Although the exact value of the incentives is unknown, it is possible to estimate how much the government has foregone in taxes and royalties.

Tax foregone

Table 15 shows that, if we assume that the industry's gross value added (GVA) is approximate to the sector's profit before depreciation and tax, the effective resulting tax rates are substantially less than the anticipated 50:50 share that published statements expect from the industry.[23]

There are likely to be different reasons for this. For example, some of the mines are in relatively early stages of production, and the government provides what is effectively a tax holiday during the first five years of any mine's operation, when all taxes and charges are waived.

Thereafter, according to the law specifying the fiscal regime, three alternative bases are supposedly used to calculate the publicly declared 50:50 split of revenues from mining.[24] However, regardless of how the 50 per cent might be calculated, as the table shows, the actual amount paid in tax

and royalties each year is substantially lower than anticipated revenue.[25] GVA is an indicator of profitable mines that should be paying tax. It seems clear that, whatever margins for error we allow in our calculations, the Philippines government has failed to collect significant the sums of taxation revenue that it declared would be paid to its exchequer during this period. No explanation for this is publicly available.

The result is that Filipinos are not benefiting from the mining of their country's natural resources, as they have been led to believe they would. The severity of the problem of these lost revenues becomes starker in the face of the government's chronic budget deficit and the decline over the years in real spending on basic social and economic services such as health and education.

Table 15: Estimated taxes and royalties foregone each year, 2001-2005 (US$ million)

	2001	2002	2003	2004	2005	TOTAL
Gross value added (GVA) (excl oil)	196	213	228	251	269	1,157
% income expected to be paid as tax	50%	50%	50%	50%	50%	
Expected tax based on GVA	98	107	114	126	135	580
Total taxes, fees and royalties from mining	21	27	28	61	35	172
Taxes foregone	77	80	86	65	100	408
% of taxes foregone	79%	75%	76%	49%	74%	

Source: Adapted from Philippine Department of Environment and Natural Resources (DENR), Mining Statistics (31 May 2006).

Social and environmental costs

Although indirect, the past, present and future social and environmental costs of mining are notorious. As the Christian Aid report, *Breaking Promises, Making Profits: Mining in the Philippines* shows, mining can devastate the lives of poor farmers, fisherfolk and indigenous peoples. The presence of a mine in an established community may itself be intrusive, disrupting traditional ways of life, economies and ecosystems which have evolved over many years. Farmers may abandon their livelihoods and sell their land for mining; they gain a short-term windfall, but lose their livelihood or end up with a menial job at the mine. The damage to indigenous cultures and whole systems of life has been widely documented. It is these kinds of social impacts that are almost impossible to put a value on.

A more prominent example of environmental disruption is the Marinduque disaster in 1996, in which a cement plug in the base of a tailings pit burst at the Marcopper mine and poisonous waste began to flow into the nearby Boac river. The leak took months to stop, by which time an estimated four million tonnes of grey, porridge-thick tailings had filled the river bed and caused widespread flooding and damage to property and rice fields, devastating the local economy and ecology.[26] The damages were estimated at a minimum of US$80 million – a sum which has still not been fully recouped from the company. The mine spill caused the death of two children, and affected the lives of an estimated 20,000 villagers.[27]

Although the Mining Act set up rehabilitiation funds which operating companies donate to, there is no way of knowing if those monies are being collected from all companies. Furthermore, there is every indication that the funds are insufficient and will not cover future reclamation costs which will be incurred when the mining projects begin to close.[33] Already there are several hundred abandoned mines of varying sizes in the Philippines, with many outstanding community claims.

The government's mineral policy asks the Filipino people to trust that it will enforce the protective provisions of the Mining Act. But it is difficult for the government to gain the public's trust for at least two reasons.

The first is the lingering doubt that the law will be effectively enforced, because the government lacks the resources to do so and because mining firms are reluctant to be fully transparent in their operations. In fact, one of the incentives to mining investors is confidentiality of information – a clear violation of the principles of sustainable development and access rights for the public that are enshrined in the Rio Declaration.[34] The government has been largely ineffective in seeking remedies for the Marcopper disaster more than a decade after it first took place.

The second problem is the legacy of abandoned mines – there are allegedly about 20 of these in the country. The private parties responsible for them have disappeared, and the rehabilitation of such mines has been passed on to the government. To prevent similar problems in the future, the government now requires mines to have a rehabilitation plan in place, with funds set aside to pay for it. However, such a rehabilitation fund may not cover the full cost of site recovery, particularly if it has grave environmental problems. For example,

'We reaffirm our stand for the repeal of the Mining Act of 1995… Allowing the interests of big mining corporations to prevail over people's right to these sources amounts to violating their right to life.'

Archbishop Angel N Lagdameo, President of the Catholic Bishops' Conference of the Philippines, January 2005[3]

the cost of rehabilitating a mine site with a contaminated watershed – a problem that is probably quite common in the Philippines because mines are often located in upland areas – is an expensive endeavour.

One estimate for the cost of cleaning up abandoned mines in watershed areas in the US at US$200 million, with an additional annual maintenance bill of millions more.[35] The US Environmental Protection Agency has estimated a clean-up cost of between US$7 billion and US$24 billion for 156 hard-rock mine sites.[36] That means on average a conservative estimate of US$44.9 million for each mine – the government alone cannot pay this large amount. The new law imposes a mine-rehabilitation cash fund into which the mining firm deposits between three and five per cent of direct mining and milling costs, or Php5 million, whichever is lower. This means an effective maximum amount of Php5 million (US$102,250). Given that the average life of a mine is fifteen years, the fund will come to Php75 million (US$1.5 million), an amount that is probably too low to have any real rehabilitative effect.

Conclusion: economic impact of mining

The government clearly sees the revitalisation of the mining industry as a lever with which to increase foreign direct investment, foreign exchange, government revenues and employment, and as a general economic driver to help kick-start local development. However, the reality is in stark contrast to the many promises of the potential benefits of mining investment.

As in so many other developing countries, the mining industry in the Philippines operates as a virtual enclave. While the state could generate huge potential revenues and related benefits, these are not yet reaching the Filipino people. The industry creates few linkages with local companies and very little employment, delivering few concrete economic benefits on the ground. The taxes and royalties the mining companies pay are low in relation to what was promised, and the generous incentives to the industry mean that the government has foregone twice as much revenue as it collected through taxes on the sector in the five-year time period studied.[37]

The Rapu-Rapu spills

In October 2005, Rapu-Rapu, a poor, remote town in the Province of Albay, gained international media attention as a mining disaster became headline news. The Rapu-Rapu mine was the site of two consecutive cyanide spills, less than three weeks apart.

President Arroyo formed the independent Rapu-Rapu fact-finding commission to investigate the disaster in 2006. It found the company, Philippines-Lafayette,[28] 'guilty of irresponsibility for starting operations prior to the completion of environmental protection infrastructures.'[29] The company had started operations too soon, violating 11 of the 29 conditionalities and sub-conditionalities in the ECC, which the commission recommended should be cancelled.

But the problem went beyond safety, health and environmental issues. The commission also questioned Lafayette's business practices, and found that its 'corporate structure, its special economic zone, the several tax incentives that it enjoys, its production reports, exports sales and taxes paid for these produced and exported items, as well as the company's social acceptability, to be questionable and tainted with irregularities.'[30] It also found both Lafayette and the Department of Environment and Natural Resources liable for pollution and other environmental and social problems the mine had caused.

As one of the 24 large-scale priority projects in the government's mining programme, the commission's report dealt a severe blow not only to Lafayette, but to the whole mining industry, even questioning the project's supposedly significant economic benefits.

Nevertheless, contrary to the commission's recommendations, the mine was given permission to restart mining under a 30-day 'test run'. A leak occurred two days into the test run, and less than two weeks later on 18 July 2006, residents reported dead fish appearing in one of the island's rivers.

The project is predicted to involve US$42 million in investments, of which the government expects to gain US$4.2 million in annual excise taxes. But how much of these projected benefits are the Philippines likely to see? The only tax that Lafayette is paying is the excise tax. Even so, the company's tax obligation was reduced by 91 per cent in 2005, thanks to its five-year income tax holiday and related tax exemptions and deductions.[31] The government has foregone a huge amount of revenue through the fiscal incentives granted by the Mining Act of 1995 and the Special Economic Zone law – amounting to US$12.4 million over the mine's continuing lifetime. Furthermore, this does not take account of the considerable health, environmental and political costs that are yet to be realised.[32]

Indeed, the potential revenues that the state could generate are huge, but they are being dissipated by the numerous, over-generous fiscal and non-fiscal incentives that the mining firms enjoy. It is argued that more than export earnings and job creation, the biggest economic potential from mining comes from the revenues it could raise. To be sure, a fiscal regime has to be investment-friendly, but at the same time, to quote the IMF working paper, it has to provide a government 'with a fair share of the economic rent'.[38] The primary issue is that the foregone revenues are arising from redundant fiscal incentives that should never have been granted to profitable, resource-seeking firms in the first place.

In addition, existing (and potential) environmental costs are high. The disasters that occurred in Marinduque and Rapu-Rapu exemplify the magnitude of costs that may well counter many of the benefits brought about by the introduction of mining in these areas. The benefits promised by the government – in terms of income and employment – continue to ring hollow. They are not based on the evidence of the last five years, but on rosy assumptions that rely too heavily on inputs from the mining industry.

The story of mining in the Philippines graphically demonstrates the conflict between attempts to use mining as a basis for development, and the assumption that to attract investors it is necessary to grant generous concessions and impose very few requirements on companies.

Recommendations

Mineral-rich developing countries

- Independently monitor the volume of production of minerals and hydrocarbon.
- Conduct a thorough analysis of the share of revenue the government is making in relation to the gross production value of its minerals and hydrocarbons and adjust the royalties rate to reflect the country's ownership of these non-renewable resources. (In undertaking this, developing countries should compare their royalty rates to all other countries producing the same resource, including developed countries, to ensure they maximize the gains they could be receiving.).
- Conduct a thorough analysis of the tax-take from the extractive sector, particularly in relation to high price periods and conduct a review of taxation policies to address this.
- Invest in building up the capacity of the national tax department to audit and monitor investors in the extractive sector.
- Sign up to Extractive Industries Transparency Initiative.
- Implement EITI fully in line with agreed principles and criteria adhering to best international practice on revenue transparency as set out in the IMF *Guide on Resource Revenue Transparency*.
- Implement robust mechanisms to ensure that revenues from extractive industries are used properly and ensure processes by which spending can be publicly accounted for.
- Make all company contracts public.

World Bank

- Act on evidence provided by their own research on the redundancy of incentives and stop advising countries to sell themselves short with over-generous investment incentives.
- Provide independent technical and, if necessary, legal support to governments seeking to renegotiate the terms of their contracts with companies.
- Provide technical support to developing countries to build up the capacity of national tax departments to audit and monitor investors in extractive sectors.

UK government

- The UK government should push for the EITI to become mandatory.
- The UK government should push for an international accounting standard that obliges MNCs to reveal where they operate, and the scale of economic activity, profits and taxes paid in each jurisdiction in which they operate.

Endnotes

Executive summary

1 PricewaterhouseCoopers, *Mine: Let the Good Times Roll: A Review of Global Trends in the Mining Industry,* PWC, 2006.

2 Damian Brett, *Trends and Players in the Mining Industry,* presentation to UNCTAD expert meeting on foreign direct investment in natural resources (Geneva) on 20-22 November 2006.

3 All figures from GFMS, *Gold Survey* 2006, London, 2006.

4 Figures from International Copper Study Group, *Copper Bulletin*, Lisbon, April 2006.

5 These case studies are based on collaborative research with our partners: CEDLA in Bolivia, Action for Economic reform in the Philippines and CCJDP and ZCSTN in Zambia.

Introduction

1 PricewaterhouseCoopers, *Mine: Let the Good Times Roll A Review of Global Trends in the Mining Industry,* PWC 2006.

2 Damian Brett, *Trends and Players in the Mining Industry,* presentation to UNCTAD expert meeting on foreign direct investment in natural resources (Geneva) on 20-22 November 2006.

3 Hilary Benn's first white paper speech, *Growth and Poverty Reduction – Creating More and Better Jobs in Poor Countries,* delivered at the New Economics Foundation on19 January 2006.

4 See Christian Aid, *What Works: Trade, Policy and Development,* 2002; Alice Amsden, *Asia's Next Giant,* New York, Oxford University Press, 1989; Alice Amsden, *The Rise of the Rest: Challenges to the West from Late Industrialising Economies,* Oxford University Press, October 2000.

5 Eg: Christian Aid, *Mining in Peru: Unearthing the Truth,* Christian Aid, 2005; *Breaking Promises, Making Profits: Mining in the Philippines,* 2004; Christian Aid, *Fuelling Poverty: Oil, War and Corruption,* 2003.

6 World Bank, *Evaluation of the World Bank Group's Activities in the Extractive Industries,* Ghana country case study, OED, 2003.

7 UNCTAD, *World Investment Report 2006*, Geneva, 2006.

8 All figures from GFMS, *Gold Survey 2006,* London, 2006.

9 Figures from International Copper Study Group, *Copper Bulletin,* Lisbon, April 2006.

10 Speech by Mr Ibrahim Msabaha MP, minister for energy and minerals, United Republic of Tanzania and World Bank mining fiscal issues workshop in Washington DC on 5-6 October 2006.

11 For example, see L Wells, N Allen, J Morisset and N Pirnia, *Using Tax Incentive to Compete for Foreign Investment: Are They Worth the Cost?*, FIAS, World Bank/ IFC, 2001.

12 Ghana Chamber of Mines, *Factoid 2006,* available at ghanachamberofmines. org/internet/documents/ Chamber%20Factoid.pdf

13 South Africa Chamber of Mines, www.bullion.org.za/publications/ facts&figures

14 Ghana Chamber of Mines, *Factoid 2006.*

15 Tanzania Breweries Ltd, advertisement in *Daily News,* Dar es Salaam, 2 June 2006.

16 Thomas Baunsgaard, *A Primer on Mineral Taxation,* IMF Working Paper WP/01/139, 2001.

17 UNCTAD *Trade and Development Report,* 2005, p. 112.

18 Thomas Baunsgaard, *A Primer on Mineral Taxation,* IMF Working Paper WP/01/139, 2001.

19 Ibid.

20 Private communication from Nicole Moussa, mining expert for Unctad.

21 Rapu-Rapu fact-finding commission, *Findings and Recommendations of the Fact-Finding commission on the Mining Operation in Rapu-Rapu Island,* 2006.

22 'Tanzania: pressure mounting on government to act on exploitative contracts', *The East African*, 26 June 2006.

23 IMF, Mali – Sixth Review under the poverty reduction and growth facility, IMF reference number 03/246.

24 Omayra Bermudez-Lugo, *The Mineral Industry of Ghana,* US geological survey 2004.

25 World Bank, *Evaluation of the World Bank Group's Activities in the Extractive Industries, Ghana Country Case Study,* OED, 2003.

26 Atsushi Iimi, *Did Botswana Escape from the Resource Curse?,* IMF working paper WP/06/138, 2006.

27 House of Commons Select Committee on International Development, *Memorandum on Debswana,* March 2006.

28 Ralph Hazelton, *Diamonds Forever or For Good: The Economic Impact of Diamonds in Southern Africa, The Diamonds and Human Security Project,* Occasional Paper No. 3, Partnership Africa Canada/ International Peace Information Service/Network Movement for Justice and Development, 2002.

29 Ibid; Modise D Modise, *Management of Mineral Revenues: the Botswana Experience,* paper presented at UNCTAD workshop on growth and diversification of mineral economies in South Africa on 7-9 November 2000.

30 House of Commons Select Committee on International Development, *Memorandum on Debswana,* March 2006.

31 Jeffrey Sachs and Andrew Warner, *Natural Resource Abundance and Economic Growth*, Centre for International Development/Harvard Institute for International Development, 1997.

32 See Laura Alfaro, *Foreign Direct Investment and Growth: Does the Sector Matter*, Harvard Business School, April 2003, www.people. hbs.edu/lalfaro/fdisectorial.pdf

33 'Tanzania: pressure mounting on government to act on exploitative contracts', *The East African*, 26 June 2006.

34 Rapu-Rapu fact-finding commission, *Findings and Recommendations of the Fact-Finding Commission on the Mining Operations in Rapu-Rapu Island,* 2006.

35 Riesco, Lagos and Lima, *The 'Pay Your Taxes' Debate: Perspectives on Corporate Taxation and Social Responsibility in the Chilean Mining Industry,* United Nations Research Institute for Social Development, Technology Business and Society Programme, paper no. 16, October 2005.

36 Pricewaterhouse Coopers, Mine, *Let the Good Times Roll: Review of Global Trends in the Mining Industry,* PWC, 2006.

37 Publish What You Pay/Revenue Watch Institute, *Eye on EITI,* October 2006.

38 UNCTAD, 2005, Trade and Development Report.

39 PricewaterhouseCoopers, *Mine, Let the Good Times Roll: A Review of Global Trends in the Mining Industry,* PWC, 2006.

40 Ibid .

41 Unctad 2003, World Investment Report.

42 *McKinsey Quarterly,* 2004, volume 1.

43 PricewaterhouseCoopers, *Mine, Let the Good Times Roll: A Review of Global Trends in the Mining Industry,* PWC, 2006.

44 *Striking a Better Balance: The World Bank Group and extractive industries*, 1 of the final review of the World Bank Extractive Industries Review, December 2003.

45 World Bank, *Evaluation of the World Bank Group's Activities in the Extractive Industries,* Ghana country case study OED 2003.

46 Onorato, Fox and Strongman, *World Bank Group Assistance for Minerals Sector Development and Reform in Member Countries,* 1998.

47 *Extractive Industries Review,* op cit, p. 18.

48 Onorato, Fox and Strongman, *World Bank Group Assistance for Minerals Sector Development and Reform in Member Countries,* 1998.

49 *Extractive Industries Review,* op cit, p. 42.

50 World Bank, *Evaluation of the World Bank Group's Activities in the Extractive Industries,* Ghana country case study, OED 2003.

51 Joel Bergsmann, *Advice on Taxation and Tax Incentives for Foreign Direct Investment,* May 1999, paper presented at World Bank Foreign Investment Advisory Service seminar in 2000, p. 7.

52 *Extractive Industries Review,* op.cit, p. 49.

53 Foreign Investment Advisory Service, 2004, *Zambia: Sectoral Study of the Effective Tax Burden,* FIAS/International Finance Corporation/World Bank, December 2004.

Bolivia

1 Around US$3.8 billion was transferred to the treasury between 1985 and 1996. See Carlos Villegas Quiroga, *Privatización de la Industria Petrolera en Bolivia: Trayectoria y Efectos Tributarios,* Cides-Umsa, Cedla, Fobomade, Diakonia, Plural, May 2004.

2 'Gobierno asegura que críticas a plan de capitalización caerán por su propio peso', *Primera Plana* 22 June 1995.

3 Juan Carlos Virreira Méndez, 'Las capitalizadas en cifras: ejecución de inversión', *Cuaderno No. 3,* Oficina del Delegado Presidencial para la Revisión y Mejora de la Capitalización, August 2003.

4 Information from YPFB.

5 Ibid.

6 Ibid.

7 Information from INE (National Institute of Statistics).

8 Ibid.

9 Lykke Andersen, Osvaldo Nina and Dirk Willem te Velde, *Trade, FDI, Growth and Poverty in Bolivia,* Grupo Integral, July 2004.

10 Interview with Raúl Kieffer, general manager of the Bolivian Chamber of Hydrocarbons, Santa Cruz, 15 September 2006.

11 Ibid.

12 All figures from Christian Aid/CEDLA: *The benefits of FDI: is foreign investment in Bolivia delivering?,* 2007.

13 Carlos Villegas Quiroga, *Privatización de la Industria Petrolera en Bolivia: Trayectoria y Efectos Tributarios,* Cides-Umsa, Cedla, Fobomade, Diakonia, Plural, May 2004.

14 Juan Carlos Virreira Méndez, '¿Cuánto costó la capitalización?', *Cuaderno No. 5,* Oficina del Delegado Presidencial para la Revisión y Mejora de la Capitalización, February 2004.

15 Tara Rangarajan, *EITI Implementation in Bolivia: A Feasibility Study,* DFID Bolivia, Consultancy Study, 24 January 2005.

16 Pablo Poveda Avila and Alvaro Rodriguez, *El Gas de los Monopolios: Análisis de la política de hidrocarburos en Bolivia,* Cedla, August 2006.

17 See La Prensa, *Chaco desiste de recuperar dinero que la liberó de multa,* 22 February 2006.

18 La Prensa, *Tribunal anula detención de ejecutivos de Repsol YPF,* 10 May 2006.

19 La Prensa, *Allanan oficinas de Andina,*10 March 2006.

20 La Prensa, *Tribunal anula detención de ejecutivos de Repsol YPF,* 10 May 2006.

21 World News Connection, *Highlights Bolivia Press,* 27 August 2004, 27 August 2004, citing an article in La Razon.

22 Carlos Villegas Quiroga, *Privatización de la industria petrolera en Bolivia: Trayectoria y efectos tributarios* Cides-Umsa, Cedla, Fobomade, Diakonia, Plural, May 2004.

23 Averages based on table 1.

24 Figures provided by the SIN.

25 'Ajustes a la ley de hidrocarburos, condición para el acuerdo con FMI', *La Prensa,* 11 January 2006.

26 'EEUU advierte a Bolivia si nacionaliza hidrocarburos', *La Prensa,* 21 June 2005.

27 Presentation by Kit Bethell, International Government and Public Affairs, BG Group at a conference 'Latin America: New Challenges, New Responses', organised by Chatham House, the Institute for the Study of the Americas, the University of London and the Inter-American Development Bank, 14 November 2006.

Zambia

1 World Bank, *World Development Report 2005.*

2 London Metals Exchange prices International Copper Study Group, Copper Bulletin Vol. 13 No. 4, Lisbon, April 2006.

3 International Copper Study Group, www.icsg.org/Factbook/copper_world/production_consumption.htm

4 World bank privatisation database at http://rru.worldbank.org/Privatization/Results.aspx?countryid=207&startyear=1995&endyear=2003§ors=1,2,3,4,5,6

5 The countries with lower tax rates are the Maldives, Vanuatu, Saudi Arabia, the United Arab Emirates, Oman and Samoa. See the World Bank's Doing Business Indicators' tax database, at: www.doingbusiness.org/ExploreTopics/PayingTaxes/Default.aspx?direction=asc&sort=3

7 Interview with Lennard Nkhata, permanent secretary, ministry of mines and mineral development, in Lusaka, 12 October 2006.

8 Thomas Baunsgaard, *A Primer on Mineral Taxation,* IMF Working Paper WP/01/139 2001.

9 Foreign Investment Advisory Service, *Zambia: Sectoral Study of the Effective Tax Burden,* FIAS/International Finance Corporation/World Bank, December 2004.

10 Interview with Lennard Nkhata, permanent secretary, ministry of mines and mineral development, Lusaka, 12 October 2006.

11 Chamber of Mines, *The Zambian Mining Industry Post-Privatisation* (unpublished – presentation given by the chair of the chamber to the IMF visiting mission to Zambia, October 2006.

12 Ibid.

13 Figures are from the annual reports of the relevant companies.

14 Hon Ng'andu P Magande, MP and minister of finance and national planning, *Budget Address,* delivered on 3 February 2006, www.zra.org.zm/BudgetSpeech.pdf

15 Source for tax rates and personal allowances: Zambia Revenue Authority, www.luse.co.zm/LuSE_Reports/Tax%20Incentives/practicenote2004.pdf

16 Interview with Eddie Kapunguly, chair of the Kitwe and District Chamber of Commerce and Industry, Kitwe, 9 October 2006.

17 Government of Zambia / Mopani Copper Mines Plc, *Development Agreement*, Clause 9.3, 2000, p. 26.

18 2003 Foreign Investment Advisory Service, Zambia: *Sectoral Study of the Effective Tax Burden,* FIAS/International Finance Corporation/World Bank, December 2004.

19 OECD, *African Economic Outlook 2004-05, Zambia,* www.oecd.org/dataoecd/23/3/34873708.pdf

20 Zambia Chamber of Mines, *The Zambian Mining Industry Post-Privatisation,* unpublished presentation to the IMF Visiting Mission to Zambia, October 2006.

21 C Mphuka, *The Cost of Meeting the MDGs in Zambia,* research report commissioned by CSPR/JCTR/CCJTP, October 2005.

Philippines

1 Gloria Arroyo was speaking at the Stakeholder's Forum on Responsible Mining for Sustainable Development, Davao City, August 2005.

2 For a full account of this trip see: www.ekklesia.co.uk/content/news_syndication/article_060815phil.shtml

3 'Bishops call on Arroyo to repeal mining law', http://money.inq7.net/breakingnews/view_breakingnews.php?yyyy=2006&mon=01&dd=29&file=1

4 www.adb.org/Documents/Books/Poverty-in-the-Philippines/Poverty-in-the-Philippines.pdf

5 World Bank, *Philippines Poverty Assessment,* Vol 1, main report, Washington DC, 2001.

6 Another indicator to measure the quality of institutions is Transparency International's Corruption Perceptions Index (CPI), which measures perceived corruption levels, based on expert assessments and opinion surveys. For the 2005 CPI, the Philippines ranked 117th among approximately 150 countries, with a score of 2.5 (out of 10).

7 Amnesty International, *Philippines: Political Killings, Human Rights and the Peace Process,* August 2006.

8 See Mines and Geosciences website: www.mgb.gov.ph/news/120204_scdecision.htm

9 Presentation by N Halcon, executive vice-president, Chamber of Mines of the Philippines, 2005; World Mines and Ministries Forum; http://64.233.183.104/search?q=cache:2-FfTa04cikJ:www.wmmf.org/2006/presentations/Halcon.pdf+Halcon+philippines+debt-ridden+companies&hl=en&gl=uk&ct=clnk&cd=1

10 CASA 'The impact of investment liberalisation and the mining act of 1995 on indigenous peoples, uplands communities and the rural poor and the environment': A summary report, www.saprin.org/philippines/research/phi_mining_sum.pdf

11 For more information on the influence of the World Bank and the Asian Development Bank in the development of the Mining Act, see note 10 above.

12 If an area qualifies as a Special Economic Zone this entitles companies operating there to additional incentives. These include: income tax holidays, exemption from taxes and duties on imported spare parts for equipment, tax credits, exemption from wharfage dues and export taxes, and additional deductions from taxable income.

13 For the commitment to wealth sharing see www.mgb.gov.ph/asomm/policy.htm

14 The Philippines is divided into a hierarchy of local government units, with the 80 provinces as the primary unit. Provinces are further subdivided into municipalities (and cities), which are in turn composed of *barangays*. The *barangay* is the smallest local government unit and equivalent to district or village level.

15 www.mgb.gov.ph/asomm/fiscal_regime.htm

16 'Report on the congressional oversight committee', *Manila Times,* 21 November 2006.

17 www.philippineembassy-usa.org/other/miningprimerrp.htm

18 Beting Laygo Dolor, 'From moribund to economic linchpin', *Philippine News,* 30 March 2005.

19 Gerard Brimo, 'A case for Mining – Making a Difference', *Philippine Daily Enquiry,* 23 July 2001.

20 www.mgb.gov.ph/miningportal/industryprofile/industryprofile2004.pdf

21 See data from the Department of Labor and Employment for employment data covering 1995-2005, www.bworld.com.ph/Research/economicindicators.php?id=0011.

22 Mines and Geoscience Bureau, *Briefing Kit: Philippines Mineral Sector,* December 2004; Section 1, (10), p. 21.

23 The industry's reported GVA is assumed to be calculated using normal national income accounting rules. If that is the case, then this figure will represent the mining industry's profit before depreciation and tax. Since tax is charged on this figure, it is appropriate to use it to calculate effective tax rates.

24 The fiscal regime for an FTAA and full details of the DENR's department administrative order 99-56 can be viewed at www.tanggol.org/environmental_laws/dao99-56.html

25 GVA measures profits, and the assumption behind the five-year tax and charges waiver is that there will be no profits in this period. This would be reflected in the GVA figure: so the combined figure reported should only relate to profitable mines, in production and should therefore be paying tax.

26 See Christian Aid report, *Breaking Promises, Making Profits: Mining in the Philippines,* 2004, www.christian-aid.org.uk/indepth/412philippines/index.htm

27 J Stark et al, *Environmental Safeguards and Community Benefits in Mining: Recent Lessons from the Philippines,* GMS-BF Mining Conference, Laos, June 2006.

28 Australian-based Lafayette Mining Ltd is the majority owner (76 per cent) of Philippines-Lafayette.

29 DENR: Assessment of the Rapu Rapu Polymetallic project; www.mgb.gov.ph/miningissues/rapurapu/rapurapuassessment.pdf

30 Ibid.

31 See 'Findings and Recommendations of the Fact-Finding Commission on the Mining Operations of Rapu Rapu'; www.banktrack.org/doc/File/dodgy%20deals/Lafayette%20Mine,%20Rapu%20Rapu%20island/rapurapureportrrffcreport.pdf

32 For the response of the company Lafayette to what it calls 'unsceduled waste water discharges', see: www.lafayettemining.com/documents/Lafayette%20responds%20to%20Philippine%20media%20reports-100106.pdf

33 Jim Kuipers, *Putting a Price on Pollution: Financial Assurance for Mine Reclamation and Closure,* Mineral Policy Institute, Paper 4, June 2003.

34 For a full report of the Marinduque case see: www.oxfam.org.au/campaigns/mining/ombudsman/2004/cases/marinduque/marinduque.html

35 P Limerick and T Brown, 'A way to clean up toxic mines', *The Denver Post*, 5 February 2006.

36 Environmental Protection Agency (EPA), 2002, Toxics Release Inventory Public Data Release Report, EPA-260-S-02-001, May 2002.

37 The Rio Declaration (on Environment and development) was a document produced at the 1992 UN conference on environment and development, or, as often referrred to, the Earth Summit. The Rio Declaration consisted 27 principles intended to guide future sustainable development around the world.

38 T Baunsgaard, *A Primer on Mineral Taxation,* IMF Working Paper WP/01/139, 2001.

The price of primary commodities, such as gold, copper and oil, has risen spectacularly in recent years. But this report shows how developing countries, in their desire to attract investment, have signed agreements that require companies to pay very little in taxes or royalties. So while many companies reap huge profits, the developing countries where the resources are extracted are scarcely benefiting at all.

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