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Editorial statement

Transnational Corporations (formerly *The CTC Reporter*) is a refereed journal published three times a year by UNCTAD. In the past, the Programme on Transnational Corporations was carried out by the United Nations Centre on Transnational Corporations (1975-1992) and by the Transnational Corporations and Management Division of the United Nations Department of Economic and Social Development (1992-1993). The basic objective of this journal is to publish articles and research notes that provide insights into the economic, legal, social and cultural impacts of transnational corporations in an increasingly global economy and the policy implications that arise therefrom. It focuses especially on political and economic issues related to transnational corporations. In addition, *Transnational Corporations* features book reviews. The journal welcomes contributions from the academic community, policy makers and staff members of research institutions and international organizations. Guidelines for contributors are given at the end of this issue.

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Transnational Corporations
Volume 18, Number 1, April 2009

Contents

Editorial Note

Adieu and Farewell

For many of us, John Dunning, who passed away earlier this year, is associated first and foremost with the world of transnational corporations or the multinational enterprise, and especially issues related to FDI and development. This is particularly true for us at the United Nations, because all along, and from the very beginning, John was closely involved in our work on these themes. From the Group of Eminent Persons, to the Hearings on Multinational Corporations and the creation of the UN Centre on Transnational Corporations more than 30 years ago, all through the debates in the United Nations Economic and Social Council, the General Assembly and other UN fora, John was actively involved with us. In New York, when we worked on what was then "the" report in the UN on Transnationals - the survey - and others, he was there, steadfast in his support. He worked with us in establishing *Transnational Corporations* (formerly the CTC Reporter) as a significant policy-orientated academic journal, now in its 18th year, which helps UNCTAD maintain a strong analytical interface with the wider research community. As Chairperson of the board he brought experience, expertise and a tireless enthusiasm to the journal.

He was there again for us in Geneva for the 'Survey of Transnationals' successor, *the World Investment Report* (WIR). He was instrumental in the way the work of the UN developed in the field of TNC, for he maintained a close and lasting link with the Organization in this matter. He was a bridge between the UN and the academic world, and I truly believe we benefited immeasurably from it. John never failed us, offering us through all these years his solid and unrelenting support. He truly believed in development and the United Nations.

Some of us would call John the "doyen" of international business and regarded his 1993 book, as "the Bible". But more than that, and more particularly for us in the WIR team, he was a

guide, a source of inspiration, intelligence and generosity. We will miss his bright and agile mind, his ability to think ahead, his curiosity and his openness. We will miss his thoroughness, his dedication… and his handwritten comments in the margin. And we will miss him perhaps even more acutely in these times of turmoil, because he would have brought his tremendous experience, and knowledge, and his incisive mind to the on-going debate.

We in UNCTAD, colleagues past and present, are proud, grateful and joyful that our paths crossed with John Dunning's and that our fates intermingled. For, as we say in French, "c'était un homme de bien ; c'était un honnête homme".

Focus on extractive industries: coming 'full circle'.

When John Dunning first became associated with the United Nation's work on TNCs, their participation in developing regions was among the highest in industries such as agriculture and extraction. Over the ensuing decades, these industries became less significant as manufacturing and services TNCs became the relatively more dominant players, both globally and in developing countries. In recent years, however, investment and other forms of TNC participation in extractive industries and agriculture has been on the rise again, and this is reflected in two recent world investment reports - in 2007 (on extractive industries) and in 2009 (on agriculture). Partly in response, one of John's research themes in recent years was the topic of 'making globalization good', in a sense coming 'full circle' to the types of development impact issues that he first worked on in his early career. It is fitting, then, that this issue of Transnational Corporations is focused on TNCs in extractive industries, most of the articles having been first produced during the research process leading up to the World Investment Report 2007: Transnational Corporations, Extractive Industries and Development.

Anne Miroux
Editor and friend

Contracting and regulatory issues in the oil and gas and metallic minerals industries

Michael Likosky *

This article looks at key regulatory and contractual issues in the oil and gas and also metal minerals industries. It provides an overview of contract types and discusses several state-of-the-art issues. In discussing contract types, it first provides a brief historical backdrop. It then turns to the major contract types. Both the history of traditional concessions and the enumerated present-day contract types are common to oil and gas and also metal mineral extraction. For this reason, they will be discussed together. Among state-of-the-art issues, the article considers (1) contract renegotiations, mainly with regard to Bolivia, Ecuador and the Venezuela; (2) the proposed Iraqi oil law; and (3) the handling of human rights and environmental issues by projects.

Key words: extractive industries, contracts, Bolivia, Ecuador, Iraq, Venezuela

1. Introduction

This article looks at key regulatory and contractual issues in the oil and gas and also metal minerals industries. It provides an overview of contract types and discusses several state-of-the-art issues. In discussing contract types, it first provides a brief historical backdrop. It then turns to the major contract types: (1) modern concessions; (2) production-sharing agreements (PSAs); (3) joint ventures; and (4) service contracts, including risk service contracts, pure service contracts and technical assistance contracts.[1] Both the history of traditional concessions and the enumerated present-day contract types

* This article was written while Michael Likosky was Global Crystal Eastman Research Fellow in the Hauser Global Law School Program, New York University School of Law (2006–2007). It was presented to the Human Rights Clinic at Columbia University Law School; thanks are due to Peter Rosenblum and to seminar participants for their useful feedback. The views expressed in this study are those of the author and do not necessarily reflect the views of the United Nations, its member States, or the institutions to which the author is affiliated.

[1] This taxonomy borrows from the three basic works in this area: Barberis, 1999; Omorogbe, 1997; Smith et al., 2000).

are common to oil and gas and also metal mineral extraction. For this reason, they will be discussed together. Among state-of-the-art issues, the article considers (1) contract renegotiations, mainly with regard to Bolivia, Ecuador and Venezuela; (2) the proposed Iraqi oil law; and (3) the handling of human rights and environmental issues by projects.

2. Historical background

Historically, the principal contractual form in the extractive industry was the concession. A concession essentially grants a private company the exclusive right to explore, produce and market natural resources. This contractual form has survived to this day, albeit in a vastly different form. Our understanding of the modern concession and other contractual forms for exploiting natural resources may be understood as a reaction against some of the excesses of the traditional concession. For this reason, it is useful to recount some of the basic features which sound repugnant to modern ears.

Importantly, the financial bargain struck between the host government and the foreign company was highly uneven, at times teetering on the verge of the unconscionable. Companies paid small sums to the host government for the rights over its natural resources. Typically, the compensation was not tied to the value of the resource itself. It was, however, tied to volume produced. For example, the Oil Concession of 1934 between the State of Kuwait and the Kuwait Oil Company Limited (United Kingdom) states:

> "(d) For the purpose of this Agreement and to define the exact product to which the Royalty stated above refers, it is agreed that the Royalty is payable on each English ton of 2.40 lb. of net crude petroleum won and saved by the Company from within the State of Kuwait-that is after deducting water sand and other foreign substances and the oil required for the customary operations of the Company's installations in the Sheikh's territories" (Oil Concession of 1934: Article 3(d)).

Because companies determined the volume of production, this meant that the interests of governments and companies could and often did diverge. That is, it was not always in the interests of companies to exploit resources fully (Smith, 1991-2, p. 495).

In addition, the scope of the traditional concession was broad, particularly with respect to duration and geography. For example,

a foreign company could be granted rights from 40 to 75 years. The Kuwait contract was to run for seventy-five years (Oil Concession of 1934: Article 1. At times, the company secured rights over large tracts of land. This control could extend to the entire country. (Omorogbe, 1997, p. 58). The broad remit meant that the interests of companies in exploiting resources were not always congruent with those of the host government. For instance, a company might not always have a financial interest in comprehensive exploration. Thus, potential sources of revenue for the host government might not be identified and pursued. Moreover, since the contract granted exclusive rights to the foreign company for the period of the concession, the Government could not seek out a different "thirstier" company. Exploration was contractually tied up. At times, certain parameters for exploration were set. This was the case in the Kuwait contract which stated:

> "(a) Within nine months from the date of signature of this Agreement the Company shall commence geological exploration.
>
> (b) The Company shall drill for petroleum to the following total aggregate depths and within the following periods of time at such and so many places as the Company may decide:
>
> · 4,000 feet prior to the 4th anniversary of the date of signature of this Agreement.
>
> · 12,000 feet prior to the 10th anniversary of the date of signature of this Agreement.
>
> · 30,000 feet prior to the 20th anniversary of the date of signature of this Agreement." (Oil Concession of 1934: Article 2(a) and (b)).

Importantly, these parameters allowed the company great freedom in determining the nature, scope and extent of exploration.

These aspects of the concession agreement did not survive decolonization, the New International Economic Order and the creation of the Organization of the Petroleum Exporting Countries (OPEC). Expropriations and renegotiations as well as newly formed contracts saw to this. As we move towards the present-day partnership-based contractual models, there is a concerted effort to rebalance specific contracts so as to remove many of these outmoded features of the traditional concession.

3. Contract types/regulatory models

Today, extraction contracts are premised on transnational public-private partnerships (Likosky, 2006, Chapter 2). Together, a transnational group of governments and companies generally share control over the financing, exploration, production and marketing of natural resources in varying degrees. For example, a foreign government may involve itself in a project through an export credit agency which advances loans to a project company.[2] Through the involvement of export credit agencies, foreign governments may influence project decision-making. This influence may be amplified in situations in which several export credit agencies are involved in a single project and coordinate their activities. At times, intergovernmental organizations may also be involved in a project.[2] The involvement of the export credit agencies and the international financial institutions will carry with it their own respective project documentation, often in the form of loan agreements. The nature and form of the overarching partnership, however, varies according to contract type. Furthermore, the contractual clauses are often even more important in defining the nature of the partnership than the contract type. The basic contract types are (1) modern concessions; (2) production-sharing agreements; (3) joint ventures; and (4) service contracts.

In a field in which nationalism and anti-foreign sentiments are rife, the name attached to an agreement may be more important rhetorically than in practice. The content of contracts is often less dependent on type and more on specific terms. Nonetheless, from a developmental perspective, service contracts arguably afford the most independence to the host State. They are often associated with Middle Eastern countries that have high levels of domestic expertise. Joint ventures are next along the spectrum, because they involve substantial host State participation, sometimes a majority equity stake. Such ventures are common internationally. Thus, it will be important to identify the nature of the venture, i.e. the relative percentages of ownership and control over the overall enterprise. Production-sharing agreements (PSAs) are currently a matter for intense controversy.[3] At the same time, in situations in which a large exploration risk exists, they may be the best way to advance developmental interests.

[2] For example, the Inter-American Development Bank is involved in the Camisea project. Likewise, the International Financial Corporation is involved in the Baku-Tbilisi-Ceyhan and Chad Cameroon pipelines.

[3] In the former Soviet Union, there is some dissatisfaction with them in retrospect. Moreover, in the Iraq context, non-governmental organizations argued that they were not an optimal means for achieving development.

Regardless of the contract type chosen, from a developmental perspective, among other issues, it will be important to attend to the levels of taxes and royalties as well as to clauses stipulating technology transfer and local sourcing requirements. Given the fact that contracts are rarely public and that conditions vary from country to country and from project to project, it is difficult to provide an estimate of normal revenue splits.

Furthermore, when assessing the development impact of the different contractual forms and clauses, generalizations are difficult. Not only do countries vary in the quality of their resources and in their level of domestic expertise, but it is possible that, as we shall see in the Iraq case, different projects within a country call for different contractual types. It may be argued, however, that contractual clauses focusing on national content, local training, host government control over key decisions, and participation by State-owned corporations all advance developmental objectives. From a human rights and environmental perspective, it may also be that the involvement of public and private international banks and also certain oil majors with relevant policies influences such practices on a project-specific basis.

The overriding importance of contractual clauses in determining the nature of revenue sharing makes it difficult to generalize about the relationship between contract forms and revenue sharing. Royalty and taxation rates will be contractually determined. This is one reason why caution is important in making generalizations as to which contract type is best for development and financial purposes. At the same time, a qualitative difference exists between concessions, joint ventures and risk-sharing agreements, on the one hand, and service contracts, on the other. Under the former models, the company will have a share in revenue, even though the extent will depend upon contractual clauses and legislation. Under the latter model, however, the company will be compensated generally by the host Government for services carried out. Under such an arrangement, the company may not have any stake in revenue: the company is contracted in to provide a set service and the Government pays it accordingly in cash. As a result, the benefits of the commercial productivity of the project do not accrue to the company.

Importantly, the evolution from the concession contract to the modern participation agreements shows how the types of activities which contracts govern have changed over time. Today, greater emphasis is placed on the development of local capacity. For example, contracts might now stress that the foreign company must, all things being equal, purchase inputs locally. In addition, a host Government is more likely

today to play a role in projects through a State-owned company. Further, human rights and environmental commitments are perhaps the most significant recent development affecting projects. These commitments are nowadays incorporated into project documentation at the impetus of multinationals, private investment banks, or international financial institutions. These areas will receive greater attention in the section below on contractual clauses and, with regard to human rights and the environment, within the section on such inputs below.

Before discussing relevant national and international legal aspects of projects, it is important to underscore that the contract will be the most important instrument by which benefits and responsibilities from projects will be distributed. Importantly, national legislative action may establish the enabling environment in which contracts are negotiated and carried out. National regulatory action may also force the renegotiation of key contractual terms. With regard to international legal action, action by international organizations may impact on the contractual relationships among parties as well as establish new ones. For example, if the International Finance Corporation (IFC) lends money to a project company, then it will be important to ascertain the terms of the loan and the mechanisms for enforcing provisions. Further, if, for example, the Multilateral Investment Guarantee Agency (MIGA) provides political risk insurance for a project, this might influence the allocations of responsibilities among project parties in a material way. Because projects pull on international resources in differing ways and because national legislation varies by country, it is not possible to arrive at ironclad rules regarding the relative importance of different levels of legal action. Nonetheless, the identification of actors involved in specific projects is an important starting point for gauging relative influence.

4. National level

At the national level, laws, regulations and contract types are all important. This section, however, focuses mainly on contract types. At the same time, the importance of laws and regulations relative to contracts may vary. For example, laws and regulations may be more significant than contracts in the metal mineral industry of certain countries.[4]

[4] Notwithstanding, Daniele Barberis, a leading commentator, makes the following point about the mining sector, which is significant for our purposes: "Many governments in developed countries use the unilateral licensing/leasing approach, while many developing countries prefer the consensual approach and use mining agreements which are negotiated with TMC [transnational mining companies]" (Barberis, 1999, p. 13).

Perhaps the difference in this approach lies in the purpose of mining legislation itself, which Barberis argues is to act as a signal of the host Government's position towards investment in the sector. In developed countries, an investor would assume that a legislative signal amounts to secure investment relatively free of legislative risk. In developing countries, however, investors are keen to contractualize commitments by the Government, arranging a reliable dispute resolution mechanism for instance.[5]

Nonetheless, laws and regulations are important in setting out the general enabling environment in which contracts will be negotiated and executed. Often, a State-owned company or Government ministry acts as the negotiating arm of the Government. In such cases, regulations might explicitly delegate such authority to the public entity, which may itself be created by legislation. Both laws and regulations are important for reinforcing contractual relationships and also, at times, for altering such relations. For example, they may be the instrument guiding contract renegotiations. Legislated changes may be in the form of increases in rates of taxation or outright nationalizations. The contract is important in setting out the primary relationships among parties.

This section looks mainly at the different types of contracts, pointing out their similarities and differences. In addition, attention is paid to how well different contracts are suited to varied economic situations. National laws and regulations will be discussed later in the context of nationalizations and contractual renegotiations. In these situations, a legal or regulatory change may gear itself towards redefining the contractually determined relationship between host government and investor. Nonetheless, although different contract forms will be elaborated below in turn, in practice the types sometimes mix with one another.

a. Modern concessions

Although the traditional concessionary contract is now a relic, concessions survive and flourish in many parts of the world, albeit sometimes as the less politically charged "license" or "lease" (Omorogbe, 1999, p. 60). Fundamentally, what distinguishes these two generations of concessions is the shift from an unequal bargain-based

[5] Australia provides an example in which the licensing system predominates. On the other hand, in Papua New Guinea mining agreements are of primary importance. (Barberis, 1999, pp. 29–39)

model to a partnership-based one. As the other main contractual forms are introduced below, the differences between the modern concession and the other forms will be discussed. This section sets out the features of the modern concession that underscore its use as a partnership-based model.

The new generation of concession contracts aims to fulfil national development and welfare goals as well as purely financial ones. For example, the contract between Indonesia and P.T. Stanvac Indonesia (PTSI) provides as follows:

"PTSI will plan and conduct all operations under this Contract in the best manner possible for the sound and progressive development of the petroleum industry in Indonesia, will at all times give consideration to the aspirations and welfare of the people of the Republic of Indonesia and to the economic development of the nation, and will cooperate with the Government in promoting the growth and development of the Indonesian economic and social structure by assisting in making available information and technical data relating to enterprises and developments which would be of mutual benefit to the Government and to the operations being conducted by PTSI as contractor for PN" (Petroleum Working Contract Between Indonesia and P.T. Stanvac Indonesia 1964: Article 15).

Just as with the first generation of concessions, today's contracts grant companies the right to explore, produce and market resources. However, the latitude afforded to companies is relatively curtailed. Control over projects is premised on partnership, not dominance. Accordingly, leading commentators speak of the move from concession to participation (Smith et al., 2000, pp. 418–425; Note, 1973, p. 774). The actual distance between traditional and modern ones often depends on the natural attributes of the country. The most important set of nations in this regard are those that make up OPEC. Countries such as Saudi Arabia, Islamic Republic of Iran, and Iraq all renegotiated traditional concessions, replacing them with dramatically different profit-sharing regimes (Smith et al., 2000, pp. 418–422). Nonetheless, the locus of control has invariably shifted along the continuum towards partnership. Unlike the production-sharing agreement, the terms of participation are mainly based on a grant for a specified period of time.[6]

[6] By way of contrast, the main aim of the production-sharing agreement is to encourage a company to undertake the exploration risk and, in return, provide a flexible period to recoup sunk costs profits.

In many countries, the transmutation of traditional to modern concessions happened through host Government-initiated renegotiations and nationalizations. These contract amendments were most famously carried out in Latin America and North Africa. The terms of the modern contracts that emerged varied by country and project. Although projects were renegotiated by each Government, in the oil sector, OPEC played a significant role in pooling information on terms of renegotiation among member countries (Smith et al,, 2000, p. 419). Most governments sought to modify contracts so as to address the excesses of the traditional concessions discussed above.

If the main criticisms of the concessions related to degree of foreign control, geographical scope and duration and also financial compensation, then it is unsurprising that the new contracts sought to rebalance these terms. Governments might limit the acreage of the concession and the duration of the contract. Thus, no longer would companies be granted rights over an entire country. Further, host governments are now keen to ensure that companies cannot leave areas unexplored for long periods. Hosts now have a say in when a company must hand control of unexplored land back to the Government. An Indonesian contract between Indonesia and P.T. Stanvac Indonesia sets forth a minimum expenditure on explorations by the oil company over a number of years:

> "a. PTSI must commence exploratory operations in the New Area under this Contract not later than six (6) months after the date the ratification of this Contract is promulgated. The minimum amounts to be spent by PTSI in conducting operations during the first eight (8) years following the date of ratification of this Contract is promulgated shall in the aggregate, be not less than hereafter specified for each of these eight (8) years as follows:
>
> | | |
> |---|---|
> | First Contract Year | U.S. 1,000,000 |
> | Second Contract Year | U.S. 1,000,000 |
> | Third Contract Year | U.S. 1,500,000 |
> | Fourth Contract Year | U.S. 1,500,000 |
> | Fifth Contract Year | U.S. 1,250,000 |
> | Sixth Contract Year | U.S. 1,250,000 |
> | Seventh Contract Year | U.S. 1,250,000 |
> | Eight Contract Year | U.S.1,250,000" |

(Petroleum Working Contract Between Indonesia and P.T. Stanvac Indonesia 1964: Article 4(a)).

Likewise in an agreement between Egypt, the Egyptian General Petroleum Corporation and Esso Egypt Inc. (United States), the concession provides that: "ESSO shall spend a minimum of forty-eight (48) million U.S. dollars on exploration over a period of twelve (12) years". It goes on to break down amounts that must be spent on a yearly basis.[7] The literature, as far as I am aware, does not provide evidence of whether countries like Indonesia and Egypt have benefited from these modern concession contracts or whether it has been wise for Indonesia, for instance, to pursue PSAs subsequently. The main clauses found in concessions are set forth below. Of course, contracts pick and choose among such clauses and the specifics vary. With regard to finances, royalties, which had previously been tied to volume of production, might be made sensitive to the market value of the resources. Taxation regimes might be instituted, eclipsing a legacy of either no or minimal taxation.

b. Production-sharing agreements

Indonesia was first to employ production-sharing agreements (PSAs) (Fabrikant, 1975, p. 3030; Machmud, 1993, p. 179; Machmud, 2000). They are at the heart of present-day controversies over oil extraction from regrets over their use in post-Soviet Russia (Stoleson, 1996-7; Timokhov, 2001-2) to their proposed employ in post-war Iraq. They are less common in mining (Barberis, 1999, p. 155).[8] This type of agreement grants a company the right to explore for natural resources. If resources are not found, then the company is out of pocket. However, if commercially exploitable resources are discovered, then the company has the right to recoup sunk costs and subsequently to share in profits. This is the incentive for shouldering the risk of non-discovery.

The PSA differs from the concession in two main respects. First, it does not grant the company ownership rights over the resource.

[7] See Egypt-Egyptian General Petroleum Corporation/Esso: Concession Agreement for Petroleum Exploration and Production 12/14/74: Article IV (Egypt-Egyptian General Petroleum Corporation/Esso: Concession Agreement for Petroleum Exploration and Production 12/14/74: Article IV Work Program, Expenditures and Management of Operation (b).

[8] Daniele Barberis argues that they are unusual in mining, "because the Government does not have a major interest in receiving the actual production of mining activities as it does with petroleum" (Barberis, 1999, p. 155). Commentators have not seriously considered whether production-sharing agreements should be used more fully in mining. In Indonesia, it was ultimately decided that a preference of such agreements would have an adverse impact on the ability to secure foreign investment insurance (Barberis, 1999, p. 155).

Accordingly, the Government may take a greater interest in technology transfer, preparing for the eventual turning over of the resources to its hands. Further, unlike the concession, which grants the company rights over the resource for a specified period of time, the PSA grants the company an interest in the resource that is tied to the recouping of sunk costs and, then of course, to the garnering of a profit. It may be useful for a host Government that is keen to encourage a company to undertake the risk of exploration. The company might find it more useful than a modern concession, for instance, in the situation in which a company is uncertain about its ability to recoup its sunk costs within the strictly definite time period provided for by the modern concession. Dzienkowski identifies the three key issues that PSAs must address: "(1) the existence of a work program or minimum dollar contribution towards development; (2) the duration of the exploration and development phase; and (3) the sharing of benefits of production between the multinational and state oil company if production is achieved" (Smith et al,, 2000, p. 454). Importantly, during a successful post-discovery phase of cost recoup and profit garnering, the Government does take a share of the financial largess through taxation and royalty.

Roughly, PSAs have been devised to encourage private investment in untested areas. Host governments appreciate certain attributes of private companies, as can be seen from the *Agreement on the Exploration, Development and Production Sharing for the Shakh Deniz Prospective Area in the Azerbaijan Sector of the Caspian Sea*:[9]

"Whereas, Contractor has the technical knowledge and experience, the administrative and managerial expertise, and financial resources to efficiently develop and produce the Petroleum resources of the Contract Area, and desires to contract with SOCAR for that purpose" (Final Consolidated Version 3/30/96: Preamble).

As a result, companies are given special financial incentives to invest, but must also shoulder the risk that no resources will be found. Along these lines, the Azerbaijan contract grants the companies the "sole and exclusive right to conduct Petroleum Operations within and

[9] The agreement was signed between the State Oil Company of the Azerbaijan Republic (Azerbaijan), on the one hand, and Socar Commercial Affiliate (Azerbaijan), BP Exploration (Azerbaijan) Limited (United Kingdom), Elf Petroleum Azerbaijan B.V. (France), Lukoil International Limited (the Russian Federation), Oil Industries Engineering and Construction (Islamic Repbulic of Iran), Statoil Azerbaijan A.S. (Azerbaijan) and Turkish Petroleum Overseas Company Limited (Turkey), on the other hand.

with respect to the Contract Area" (Final Consolidated Version 3/30/96: Article 2, Section 2.1).

To entice companies to seek out resources, the host Government, upon discovery of resources, allows companies to recoup sunk costs and to garner an agreed-upon profit. If the company does not succeed in finding resources, then it is generally out of pocket. The Azerbaijan agreement, for instance, provides:

> "2.2. Except as expressly provided elsewhere herein, in the event production resulting from Petroleum Operations, upon completion of commercial production from the Contract Area at the end of the term of this Agreement, inclusive of all extensions provided in Article 4 is insufficient for full recovery of Contractor's Capital Costs and Operating Costs as provided hereunder, the Contractor shall not be entitled to any reimbursement or compensation for any of its costs not recovered" (Final Consolidated Version 3/30/96: Article 2, Section 2.2).

If a commercial discovery is made, then the company has the right to recoup sunk costs and an agreed-upon profit. For example, the Azerbaijan contract indicates:

> "(a) Contractor shall be entitled to the recovery of petroleum costs as follows:
>
> (i) All Operating Costs shall first be recovered from Total Production;
>
> (ii) All Capital Costs shall then be recovered from a maximum of fifty (50) percent of Crude Oil and fifty (50) percent of Non-associated Natural Gas remaining out of Total Production after Crude Oil and Non-associated Natural Gas required to recover Contractor's Operating Costs ('Capital Cost Recovery Petroleum'). (Final Consolidated Version 3/30/96: Article 11 Contractor's Recovery of Petroleum Costs and Production Sharing, 11.2 Cost Recovery (a)(i) and (ii))." (Final Consolidation Version 3/30/96: Article 11 Contractor's Recovery of Petroleum Costs and Production Sharing, 11.2 Cost Recovery (a)(j) and (ii))."

Afterwards, according to this particular agreement, profit sharing between the host Government and the companies kicks in with a profit-sharing formula (Final Consolidated Version 3/30/96: Article 11, 11.5 Profit Petroleum).

Under PSAs, in the partnership forged between governments and companies, the host maintains varying degrees of oversight over decision-making. The life cycle of the project is important here. If a project will eventually shift to Government control once the company has recouped costs and captured a profit, then the host must plan from the start for this eventuality. This means that decisional control is partially reserved to the Government even during the period of robust private involvement.

The Government must also ensure that it has the knowledge and expertise necessary to eventually run the project. The attendant increased micro-level Government participation is also in line with the overarching emphasis on partnership.

c. Joint ventures

Also in line with the partnership-based approach, under the joint venture (JV) arrangement, the foreign company does business with a national State-owned company. The venture may involve creating a jointly controlled project company. Like the concession and the PSA, it is important to look to the specifics of the venture's legal arrangement in order to ascertain the extent to which the control over the companies rests in foreign or domestic hands. As indicated, contract types often blend into one another. What is important about the JV, in distinction to modern concession and PSAs in the purest forms, is that it provides a corporate-based, structured means for technology transfer and shared decision-making. Of course, such goals may be accomplished through other instruments; however, a corporate partnership may be the most strategically attuned means available.

JV agreements may be found throughout the world. As contracts are not generally public, it is not possible to conclude that they look the same everywhere. Nonetheless, it is fair to assume that the contents of JV contracts are shaped by political exigencies everywhere. Thus, when the host Government is in a strong negotiating position, the local partner may have greater rights than in a situation in which the local strength is limited. The politicized nature of these arrangements is evidenced by the recent controversy over the Russian Government's intervention in the Sakhalin-2 project, a JV among Shell, Mitsui (Japan) and Mitsubishi (Japan).

Importantly, JVs may be incorporated into other contractual types, such as PSAs. For example, the Azerbaijan contract involves mixed corporate participation. The relevant clause is set out in the next section.

Likewise, the Camisea project discussed in the human rights section below is a JV project. It is important to look to the specific clauses included in the JV agreement. Once again, this may be more a matter of picking and choosing than contract form-specific considerations.

Like the PSA, the JV arrangement puts a premium on technology transfer. The aim is to foster eventual genuine independence by the State-owned company. Inevitably, the prospect of independence runs counter to the interests of foreign copanies. As a result, the extent of technology transfer built into the joint venture is negotiated and varies depending upon the bargaining strength of the national government.

d. Service contracts

Often, the Government seeks to exert greater control over the exploration and exploitation of its resources. It may do this through service contracts, whereby private companies are brought in to accomplish carefully delimited tasks. Unlike modern concessions, PSAs and JVs, service contracts are thought of as a device in which the host Government exercises the greatest control over a project. In this case, the host Government is only contracting in the foreign company to perform a carefully delimited service. The company does not generally share in the revenue produced. Thus, the host Government does not yield control of the resource in a meaningful way. Under the service contract, a host Government must have the requisite technological know-how and access to capital. Often, this is not the case when exploration risk capital is required. It is also important to remember that a service contract might be for a minor task and thus preferable to the other contract forms. The three main types of service contracts are the risk service contract, the pure service contract and the technical assistance contract.

Risk service contracts. Like PSAs, risk service contracts address a situation where a host Government is seeking to use private companies to bear the risk of exploration. Two scenarios are envisioned: either commercially exploitable resources are identified or they are not. If they are, then the company receives cash remuneration for its efforts in addition to a possible stake in the subsequent enterprise. If resources are not found, then the company is out of pocket (Omorogbe, 1999, p. 63; Neto, 1985). These types of contracts are generally out of favour. (Smith et al., 2000, p. 511).

Pure service contracts. More straightforward are pure service contracts, whereby a company is brought in to perform a defined service and compensated accordingly. Unlike risk service contracts, the

host Government shoulders all risks. Under this type of contract, the company also acquires an interest in the extracted resource (Omorogbe, 2000, pp. 63–64).

Technical assistance contracts. Technical assistance contracts represent the last main type of service contract. Their scope is narrower. As with the other service contracts, the company is brought in to perform a defined task for which it receives a fixed compensation. Unlike the other service contracts, however, the company has no possibility of acquiring an interest in the resource (Omorogbe, 2000, p. 65). Importantly, the technical service contract appears closest to a transnational public-private partnership, in which the host Government is the strongest party. Once again, it is important to recognize that contract choice is tied as much to rhetorical needs as anything else:

> "The technical assistance agreement is one of several types of arrangements that can be used to take advantage of the multinationals' technological and managerial expertise and capital resources while allowing the host country to maintain at least the appearance that its State oil company has control and ownership" (Smith et al., 2000, p. 512).

Often, service contracts are held out as the ideal choice in situations characterized by nationalism. However, the value of a host country's natural resources may be more determinative of contract form choice. Nonetheless, as indicated above, the meaning of the contract may ultimately lie in the content of the clauses.

e. Contractual clauses

As indicated above, the choice of contract type might be less important than the content of particular contract clauses. Dzienkowski argues:

> "As stated before, although one can attempt to offer conceptual and theoretical differences among the three [contractual types], in reality it may be difficult to classify petroleum agreements into one category. This difficulty may result from a harmonization of agreements whereby the parties are borrowing the best type of agreement to fit a particular situation" (Smith et al., 2000, p. 472).

In a joint venture arrangement, a contract may specify the percentages held in the enterprise by the various contracting parties. For example, the Azerbaijan contract provides the following breakdown:

"1.1 The Rights and Obligations under this Agreement of each of the Contracting Parties shall be held in the following respective percentage of Participating Interests as of the date this Agreement is executed:

CONTRACTOR PARTIES	PERCENTAGE
SCA	10.0%
BP	25.5%
Elf	10.0%
Lukoil	10.0%
OIEC	10.0%
Statoil	25.5%
TPAO	9.0%
TOTAL	100.0%

(Final Consolidation 3/30/96: Article 1 Participating Interests, Section 1.1.).

The number of parties to such an agreement and their according shares will, of course, be project dependent.

Another important clause in a contract is the one setting out reimbursement for sunk exploration costs. In some cases, the project company will shoulder this risk, as under the risk-sharing agreement. In other cases, the host Government may cover all or part of this cost. A clause might indicate the company's responsibilities during the exploration phase. This might include a commitment to spend a specified amount of money on exploration or to undertake an agreed level of exploration. There may be a provision within the contract indicating the circumstances under which the company may be granted an extension of the time allotted for exploration.

A different set of provisions may govern the discovery phase. For example, the company will be obligated to notify the host Government in the case of a discovery of a commercially exploitable resource. The Azerbaijan contract here provides:

"4.4 Discovery

Before the end of the Exploration Period or if the Contractor enters the Additional Exploration Period then [sic] before the end of the Additional Exploration Period, Contractor shall notify SOCAR in writing of a Discovery and its commerciality, summarising relevant information relating to said Discovery, including but not limited to the following, to the extent same are available: location

plan, geographical maps and interpretations, seismic and other geophysical data, drilling reports, well logs, core samplings, lithographical maps and description of formations, drill stem tests, completion reports, production tests including quantities of fluid produced, build-up/draw down tests and pressure analysis, and analyses of oil, gas and water samples and other information consistent with generally accepted Petroleum industry practice" ("Notice of Discovery and its Commerciality"). (Final Consolidation 3/30/96: Article 1, Section 4.4).

Contractual clauses may also set out specific terms governing the production phase. This phase may last a number of years and a clause may set out the conditions upon which it may be extended. It may be important for the host Government to set out specific commitments during this phase, because, as indicated earlier, it is possible that host Government and company interests may diverge, that is, it might not be in the commercial interests of the company to exploit fully reserves within a time frame that the Government desires.

As indicated in the section on PSAs, many of the decisions regarding the strategic exploitation of reserves may be governed by an oversight committee with representatives from the host Government and the companies. A mechanism for decision-sharing may be a useful way of resolving conflicting commercial and political interests.

Contracts may also stipulate certain local content preferences. For example, a contract may include a clause indicating that the company is to employ local workers, as long as they meet certain qualifications. For example, the Azerbaijan contract provides:

> "(b) Contractor shall require Operating Company to give preference, as far as is consistent with efficient operations, to employ citizens of the Azerbaijan Republic in the performance of Petroleum Operations to the extent reasonably practicable, provided that such citizens have the required knowledge, qualifications and experience. Such citizens shall be eligible for training in Accordance with Article 6.8" (Final Consolidation 3/30/96: Article 1, Section 6.7(b)).

The host Government might require that the company train locals. Likewise, a company may agree to source goods locally. For example, the agreement between Egypt, the Egyptian General Petroleum Corporation and Esso Egypt Inc. (United States) provides in the relevant part:

"ARTICLE XXIII

LOCAL CONTRACTORS AND

LOCALLY MANUFACTURED EQUIPMENT

(a) The Operator and its contractors shall: –

(1) Give priority to local contractors as long as their prices and performance are comparable with International prices and performance. The Operator shall, however, subject to the preceding sentence, be exempted from the provisions of Presidential Decree No. 1203 of 1961 as amended.

(2) Give preference to locally manufactured materials, equipment, machinery and consumables, however, such material may be imported for operations conducted hereunder if the price of locally manufactured material at Operator's stores is more than ten (10%) per cent higher than the price of the imported material at Operator's stores." (Egypt-Egyptian General Petroleum Corporation/Esso: Concession Agreement for Petroleum Exploration and Production 12/14/74: Article XXIII(a)(1) and (2)).

It is also worth noting that contracts may require the company to keep certain records of its operations. Governments may find such provisions useful in determining taxation and royalty rates. Governments may not always have the expertise or capacity to enforce certain revenue schemes. Thus, such clauses may reduce the burden on the Government.

Moving forward in the project cycle, contracts may provide for the transfer of control away from the company and towards the host Government. For example, a clause may provide that facilities will transfer to the Government as the company leaves the country. The clause may stipulate the condition of the facility, for instance. And, lastly, as indicated in the section on renegotiations below, a contract will typically include a clause indicating how possible disputes will be resolved; both the forum and choice of law may be stipulated in the contract.

In conclusion, it is important to note that one cannot generalize about revenue-sharing and the prevalence of specific contract clauses within agreements. Such information is not publicly available. At the same time, it can be debated whether it would be in the interests of developing countries to have such information published. At present, it is the sort of information that experienced countries and active law firms might hold privately.

5. Bilateral and multilateral agreements

Although this article focuses mainly on different contract types, it is important to point to some key bilateral and multilateral legal issues. Because of space constraints, this section considers a few selected issues rather than providing a cursory survey. It first looks briefly at bilateral investment treaties (BITs) and bilateral subsidy programmes before turning to the multilateral level, looking at the subsidy programmes of international financial institutions.

Parties to an investment agreement generally stipulate the choice of law and forum in which any contractual disputes will be heard. A dispute might be heard in an international arbitration tribunal or else in the national courts. Parties may have to exhaust local courts before turning to the international tribunal. In situations of ambiguity, a relevant BIT between the governments of the respective parties may provide guidance.[10]

Many international projects rely on public and private sources of financing, domestic, foreign and international, raising various legal implications. National public banks and insurance agencies play a role in facilitating projects through subsidy programmes. These subsidies range from the political risk insurance provided by the United States Overseas Private Investment Corporation (OPIC) to the loans offered by the United States Export-Import Bank or the French COFACE. These public subsidies are used by project companies to encourage private banks to invest in projects that are otherwise too politically risky. Importantly, developing countries increasingly have their own export banks which play a role in facilitating South–South investment. Public banks may facilitate private investment through finance sweetening insurance policies, loan agreements and feasibility studies. They may also mitigate political risk through informal political intervention. In other words, their involvement may mean that the home State government of the multinational involved might be willing to step in should a conflict arise with the host Government and use diplomacy to smooth the situation out.

[10] Otherwise, it is worth noting that legal scholars are currently debating the significance of BITs for development (Elkins et al.,2006; Rose-Ackerman and Tobin, 2005). To date, however, legal studies have not isolated oil and gas or hard mineral extraction for study. Thus, given the early stage of these studies and the lack of relevant sector-specific published data, it is too early to generalize about the relationship between BITs, investment and development in our area.

At the international level, subsidies similar the bilateral-based ones exist. The Energy Charter Treaty is relevant in this context as it advances sustainable, sovereignty-respecting development. The most important public subsidies are offered by the World Bank Group through the IFC and MIGA. The Oil, Gas, Mining and Chemicals Department of the IFC is particularly relevant. For example, the Baku Tbilisi Ceyhan oil pipeline relies on a diverse set of public agencies. The pipeline part of this project runs through several countries, including Azerbaijan, Georgia and Turkey. Among others, this pipeline is financed by seven export credit agencies, the European Bank for Reconstruction and Development, the IFC and fifteen commercial banks.[11] Each bank, public and private, will have its own set of project documentation. This may mean multiple loan agreements, each with its own set of terms and conditions. At the same time, the actions of multiple public and private banks are often coordinated.

These public agencies may attach certain conditions to their subsidies. For example, both OPIC and the Export-Import Bank often attach environmental and human rights conditions to their loans. Complying with these conditions may mean establishing special entities or else hiring consultants to ensure that wishes are fulfilled. Such conditions will be discussed in detail below. Importantly, they must be understood in tandem with international efforts through the IFC and MIGA. They must also be related to the initiative by the major private investment banks involved in projects, the so-called Equator Principles.

6. Selected state-of-the-art issues

Talk of oil and gas and also metal mineral projects regularly occupies our headlines. This section seeks to focus on three bones of contention: (1) contract renegotiations; (2) the proposed law for governing resources in Iraq; and (3) human rights and environmental contractual issues.

a. Contract renegotiations

Contract renegotiations have recently dominated the public reporting of Bolivia, Ecuador and Venezuela. In each country, the

[11] See www.bp.com/genericarticle.do?categoryId=9006669&contentId=7014358.

Government has justified the renegotiations on development grounds.[12] This section briefly presents the controversy, discusses legality issues that may emerge and provides some observations on the relationship between the present wave of renegotiations and development.

In Bolivia, the Government passed Hydrocarbon Law 3058 in 2006. This law repealed the 1996 Hydrocarbon Law which had privatized the sector, moving control over resources back to the State. Control over resources was thus transferred to the State agency, Yacimientos Petroliferos Fiscales Bolivianos. Nonetheless, foreign companies are likely to continue to play a role in the future as well given the lack of national expertise. Accordingly, although the 2006 law cancelled contracts, it also directed the negotiating of new ones but on terms more favourable to the Government, including higher tax and royalty rates. As in Venezuela, the aim is to establish a series of joint venture agreements.[13]

In Ecuador, the new hydrocarbons law set off a policy of contract renegotiation and increased Government revenue from projects. In a parallel but thematically related action, the Government entered into a dispute with Occidental (Vasqueez, 2007). In turn, Occidental brought an action in connection with demands for the payment of value-added taxes.[14] Investments in Venezuela must now be pursued through the State-owned company, Petroleos de Venezuela, S.A. Both service contracts and joint ventures are possible. In 2001, the Government passed a new hydrocarbons law. In part, it required that future investments be under 51 percent control by the State company (Hydrocarbons Law of 2001:

[12] In Bolivia, for example, the renegotiations are themselves being driven in part by protests, and in Ecuador, protests have hit the bottom line of Petroecuador (Kerr, 2007). Meanwhile, the President of Venezuela, Hugo Chavez, has made the case that State control over natural resources is popularly motivated and has used funds from the State-owned oil company, Petroleos de Venezuela, to finance social programmes at home and abroad.

[13] "Bolivia: a lot of gas for partial takeover?" *The International Review*, Fall 2006.

[14] Among other things, the company claimed that Ecuador had expropriated its property – a claim that the tribunal dismissed (Occidental Exploration and Production Company v. The Republic of Ecuador 7/1/04; Republic of Ecuador v. Occidental Exploration and Petroleum Company 2005). Similarly, in a separate claim brought to an arbitration tribunal by EnCana Corporation, also over tax payments, the tribunal decided that expropriation had not occurred (EnCana Corporation v. Republic of Ecuador LCIA 2/3/06).

Article 22). However, the Government has progressively renegotiated existing contracts to comply with this requirement. A presidential decree in February 2007 expropriated projects in the Orinoco River Belt. In doing so, it formed mixed corporate entities charged with exploiting resources. Petroleos de Venezuela is to hold majority stakes in these entities. Further, the decree provides that any disputes regarding the Orinoco projects will be heard in Venezuelan courts according to Venezuelan law (Dugan and Profaizer, 2007). Also significant, Article 44 of the Hydrocarbons Law raises royalty rates.[15]

At times, talk of the introduction of new taxes, royalties or price ceilings extended to Algeria, Argentina, Chad, the Russian Federation and others (AFX International Focus, 2006). For example, Chad plans to establish a State-owned oil company and renegotiate certain contracts. Similarly, Equatorial Guinea also aims to renegotiate contracts. Mauritania has sought to sever certain contracts. The Russian Federation has changed positions on the advisability of production-sharing agreements.

No clear evidence in the legal literature exists as to whether the present wave of renegotiations advances developmental goals. A consensus has emerged that previous negotiations had some justification given the need to combat the legacy of colonialism. At the same time, a case might be made that the present wave could promote development goals if the renegotiations guaranteed an equitable redistribution of revenues from resources. Whether this is achievable will depend on the terms of renegotiations, the micropolicies of State-owned companies, legislative action and also the ability of governments to maintain foreign financial and corporate interest in their projects.

Legal arguments for and against renegotiations and nationalizations occur along a spectrum. At one end, detractors argue that contracts should include stabilization clauses, freezing the law governing the contract to the one in force at the time of contract formation. Such arguments are based on the principle of "sanctity of contract"; the position that the wishes of the parties as embodied in the terms of the agreement should govern. An Egyptian contract provides an example of a contract that avoids renegotiations:

> "(b) The rights and obligations of EGPC and ESSO under, and for the effective term of, this Agreement (as well as matters relating

[15] For a critical discussion of the Venezuela Law and its legal basis see Rentner (2004).

to the Joint Company subject to Article IV hereinabove) shall be governed by and in according to the provisions of this Agreement and can only be altered or amended by mutual agreement of the parties." (Egypt-Egyptian-General Petroleum Corporation/Esso: Concession Agreement for Petroleum Exploration and Production 12/14/74: Article XVI Rules and Regulations (b)).

The Russian law governing PSAs provides investor protections against changes in legislation, while specifying certain exceptions:

> "2. In the event that within the duration of the agreement the legislation of the Russian Federation, the legislation of subjects of the Russian Federation and normative acts of self-government set norms deteriorating the commercial results of the investor's activities within the framework of the agreement, amendments shall be made to the agreement which shall safeguard those commercial results of the investor which he would have obtained if the legislation of the Russian Federation, the legislation of the subjects of the Russian Federation and normative legal acts of local self-government effective as of the conclusion of the agreement would continue to apply. The procedure for the introduction of such amendments shall be specified in the agreement.
>
> The aforesaid provision concerning a change of the terms and conditions of the agreement shall not apply in the event that the amendments are introduced by the legislation of the Russian Federation to the standards (norms, rules) for the safe conduct of works, the protection of the subsoil, the natural environment and the health of the population, including their modification to adapt them to similar standards (norms, rules) which are accepted and generally recognised by international practice." ([Russian] Federal Law on Production Sharing Agreement 1996: Article 17(2)).

A middle position is that parties may voluntarily incorporate a renegotiation clause into the contract itself. An example of a renegotiation clause occurs in the agreement between Kuwait and Aminoil (United States):

> "If, as a result of changes in the terms of concessions now in existence or as a result of the terms of concessions granted hereafter, an increase in benefits to the Governments in the Middle East should come generally to be received by them, the Company shall consult with the Ruler whether in the light

> of all relevant circumstances, including the conditions in which operations are carried out, and taking into account all payments made, any alterations in the terms of the agreements between the Ruler and the Company would be equitable to the parties" (quoted in Kroll, 2004).

Renegotiation clauses are inserted in many contracts. Renegotiations generally can be squared with national and international laws, although with some contrary voices. For example, Abba Kolo and Thomas Wälde argue that the spirit of the contract may be more important than the actual written text. They acknowledge that in principle:

> "[t]he philosophy behind renegotiation is that the contractual relationship is more important than the formal contract document itself and that parties will make all efforts to let this relationship survive if and to the extent that it is in their interest to let the relationship survive – and sometimes send a signal to the outside world over the 'reasonableness' of the government or company in dealing with its partners on a long-term basis of mutual benefit and trust" (Kolo and Wälde, 2004).

Zeyad A. Al Qurashi argues that "a renegotiation clause may play a facilitative role in stabilizing long-term agreements such as international petroleum agreements, whose nature creates a high risk of instability" (Al-Qurashi, 2005, p. 268). As a practical matter, it could be argued that it is within the sovereign's prerogative to renegotiate contracts, if not *de jure* then certainly *de facto*. Generally speaking, as a matter of doctrine, it would be difficult to sustain the position that renegotiations are absolutely contrary to national or international law.

Nonetheless, the conflict in international law is between freedom of contract and sovereign prerogative, on the one hand, and sanctity of contract and stabilization, on the other. Unsurprisingly, the host State might seek to have disputes heard within its own courts applying its own laws. On their side, investors have sought to guard against host State legislation or regulation that modifies the terms of the host State agreement both through choice of law and forum provisions and also the insertion of stabilization clauses (Muchlinski, 1995, p. 494). With regard to the former, the aim is to have disputes resolved in more investor-friendly international tribunals. Furthermore, investors seek to have a law friendly to their interests govern the dispute. The use of a stabilization clause aims to freeze the national law applicable to the contractual relationship to that one in force at the time the contract was entered into.

Tribunals have taken different sides on this debate. On the one hand, in certain cases, international tribunals have sided with contract stabilization and sanctity of contract, most notably in Texaco's dispute with Libya. The general position has, however, gone the other way, with "fundamental change of circumstances" sometimes cited as justification (Muchlinski, 1995, pp. 493–497). As argued by one scholar: "despite the above-mentioned arguments favouring the strict stability of international investment agreements, international practice in this field has increasingly favoured the periodic renegotiation of such agreements […] In these circumstances the international legality of renegotiation per se can no longer be doubted" (Muchlinski, 1995, p. 497). At the same time, coercive action, duress and discrimination must be guarded against (Muchlinski, 1995, pp. 498–501). Where "a foreign investor is irrevocably deprived of its contractual rights in a joint venture created under an investment agreement, such an interference will give rise to a right of compensation" (Muchlinski, 1995, p. 501). Although it is outside the scope of this article, the appropriate standard for determining compensation is contested and positions taken on it will depend upon the strategic interests of disputants.[16]

Renegotiations have been triggered by a variety of factors, and tribunals have addressed the fallout. The issue has not been entirely whether changed circumstances justify the renegotiations, but rather a focus on how the renegotiations themselves have been conducted. Generally, a norm has emerged which concentrates on the renegotiation process, taking into account the original agreement, good faith between parties, and the need for a tailored renegotiation period.[17] Importantly, a duty to renegotiate in due faith has been established by at least one tribunal. In another important case, the trigger was the Iranian revolution (Al-Qurashi, 2005, pp. 292–299).

The shift from traditional concessions to the modern partnership-based agreements often involved contract renegotiations and sectors

[16] On compensation see Muchlinski (1995, pp. 506–514).

[17] For example, in the AMI-NOIL case, a rise in oil profits in the early 1970s led to an attempt by three Arab States to reformulate the revenue share. Subsequent negotiations failed, and the Government of Kuwait severed its agreement with AMINOIL. The renegotiation had occurred under the auspices of a contractual clause, and the court in part decided on whether the renegotiation had in fact been carried out properly. Thus, the concern was with establishing a new contractual equilibrium. In another case regarding relinquishment, the tribunal took the original contract into consideration when determining the new equilibrium.

mainly during the nationalizations of the 1970s and 1980s and generally occurred in the extractive industries (Muchlinski, 1995, p. 493). In addition to the OPEC renegotiations, as Kolo and Wälde point out, others have taken place in Papua New Guinea (1967), Chile (1967–1971), Jamaica (1974), the Dominican Republic (1987, 1988), Peru (1985) and Colombia (1996).[18] Importantly, they have not been limited to developing countries; advanced capitalist economies such as the United Kingdom have pursued renegotiations. Further, they have not just been instigated by governments. At times, companies have pushed for them (Kolo and Wälde, 2004).

Commentators often tie the recurrence of renegotiations to the nature of the underlying contract between host State and foreign corporation. These contracts in the extractive sectors are often long term. As a result, over their lives, the value of the commodity may fluctuate. Perhaps unsurprisingly, as prices rise significantly, governments seek a larger share of profits. Renegotiations generally occur in a "period of increased prosperity, in which the sense of dependence on foreign investors may be reduced and nationalistic sentiments heightened" (Muchlinski, 1995, p. 493). Similarly, writing in an earlier period of recession, another scholar argued that:

> "When conditions change, it is reasonable to assume that the developing countries will once again make efforts to assert 'permanent sovereignty' over their natural resources in whatever way possible and that since it is their second time around, they will achieve greater success. Any supposed 'incentives' or stabilization measures which have come into existence during this period and which appear to run counter to nationalistic ideals are likely to prove problematic in the long run" (Omorogbe, 1997, p. 30).

The present wave of renegotiations may simply mean reallocating profit shares between governments and companies. Accordingly, in a situation of renegotiation, a company will remain in a project so long as the proposed reallocation is financially still in its interests. The Government will accommodate the company in this respect, so long as it still relies upon the company's expertise. Further, the Government must take care not to upset other potential investors: companies and banks, ratings agencies and insurers.

[18] For an overview of these renegotiations see Kolo and Wälde (2004).

Commentators disagree over whether the present wave of contract renegotiations advances development goals. Importantly, literature touching on this issue is sparse. Nonetheless, arguments exist on both sides. A pro-renegotiation law-based position has been advanced by a non-lawyer, Joseph Stiglitz. His argument was put forward in relation to the Bolivia renegotiation in the form of a newspaper piece, not an academic article. Stiglitz argues that the Bolivian renegotiations were justified based on their "attempt to represent the interests of the poor people of [the] country" (Stiglitz, 2006), maintaining that the privatizations which the recent renegotiations sought to overturn were themselves not legally valid, having not passed through Congress as required by law. He thus likens the renegotiations to the return of stolen artwork:

> "Moreover, many deals were apparently done in secret by previous Governments – and apparently without the approval of Congress. Indeed, because Bolivia's Constitution requires the approval of Congress for such sales, it isn't clear that Morales is nationalizing anything: the assets were never properly sold. When a country is robbed of a national art treasure, we don't call its return 're-nationalisation', because it belonged to the country all along" (Stiglitz, 2006).

Thus, the Bolivian people, the argument goes, are entitled to a fair share of profits from their natural resources. Whether the argument put forward by Stiglitz can be generalized to renegotiations throughout the region requires further study. Nonetheless, his argument that contracts must be made in an open and transparent manner does seem a prerequisite for any development inducing renegotiation.

A broader point might be made regarding transparency and contracts in this area. The overriding norm is non-disclosure. Nonetheless, important progress has been made by the Extractive Industries Transparency Initiative (EITI) and other initiatives, which crucially do not abrogate the principle of non-disclosure. For example, in Azerbaijan, efforts have been made to publish relevant information in the aggregate so as to assuage confidentiality concerns. Promisingly, these initiatives are leading to the publication of revenue information, and inquiries into how revenues are being directed have on occasion been initiated. At the same time, it is important to move towards the publication of contracts themselves. As the discussion of the contract types and clauses above showed, development issues may be found in many areas of a contract. In Ghana, companies have moved to publish how revenue streams have been directed to areas such as education, health, and infrastructure. Similarly, Nigeria has started to ask related

questions. Effective public oversight requires disclosure of key terms. Arguably, disclosure will depend on the willingness of corporations to support transparency. It has not been proven that so-called Western companies are more likely to participate in transparency initiatives than their developing country counterparts. In an era of multinational joint ventures, it may be that any difference is arguably diminished.

Without the broad publication of contracts, it is difficult to determine the practical significance of renegotiations for development. It may be that determination of the developmental aspects of these renegotiations requires the publishing of contracts, both before and after renegotiation. The focus on making revenue information public by countries such as Kyrgyzstan is promising. Otherwise, it is not obvious where the new revenue is being allocated. It is also not clear whether the structure of the relationships between host governments and firms is itself being reformulated to serve development goals.[19]

Others argue that the present renegotiations run counter to the interests of developing countries and should only be pursued in exceptional circumstances. They distinguish the OPEC renegotiations from the present wave. In doing so, the argument made is that sanctity of contact is a pillar of development-inducing globalization. Thus, contracts should be respected. If a country goes wayward, it may not be legally sanctioned. However, the logic of the market will reverse any perceived gains. Kolo and Wälde underscore this impact: "loss of reputation and credibility, not the threat of legal sanctions (which does matter a lot) […] The fear of being ostracized, isolated and boycotted by other players may not only have a psychological effect but may influence, in a practical and positive way, respect for contracts" (Kolo and Wälde, 2004, p. 28).

What then are the lessons from the present wave of contract renegotiations? For one, determination of the developmental impact of renegotiations should not turn on questions of legality, not because of jurisprudential uncertainty but instead because of the infrequency of recourse to tribunals to resolve today's disputes. At the same time, Kolo and Wälde correctly observe that threats of litigation may be important, although this is a difficult variable to measure. From a developmental perspective, however, law is nonetheless important in at least two respects. First, it will be important to look at the actual terms of the renegotiation as embodied in the amended or new contract. For example, does the

[19] Examples here and elsewhere of transparency initiatives may be found in the Extractive Industries Transparency Initiative, *Source Book* (March 2005).

renegotiated contract place new responsibilities on the multinational when it comes to alleviating poverty? If the contract is simply a reallocation of profits, a second point arises: is the host Government using the revenues itself either through legislative or regulatory action in a manner that advances the interests of development? There is no data on the renegotiations in this regard. However, in situations in which international financial institutions are involved in projects, human rights and environmental conditionalities may be monitored by the hiring of consultancy firms.[20]

From a legal perspective, in answering these questions, it will be necessary to monitor the evolution of legislative and contractual provisions aimed at achieving development through renegotiation. The literature on these issues is understandably provisional given the state of knowledge. Furthermore, as we will see in other areas, it is necessary to attend not only to legal pronouncements, but also how laws function in practice.

b. Iraq

This section discusses two issues raised by the proposed Iraqi legislation covering oil and gas. It looks at contract choice and renegotiations. Importantly, the contract types provided in the legislation accord with the general public-private partnership approach, given the importance of commercial interests in providing "technical, managerial and operational skills as well as robust capital resources" (Preamble). At the same time, it favours "substantial national participation" through overarching management as well as through national companies, "Iraqi products and services", "training and technology transfer", and also "affiliations, joint ventures and other forms of partnership and or cooperation in order to promote the rapid growth of an Iraqi private sector capable of assisting and enhancing Petroleum Operations to the mutual benefit of the said holders and the nation" (Article 15). It is within this backdrop that the identified issues should be understood.

A few initial words might be said about the Federal Oil and Gas Council. It plays an advisory role to the Council of Ministers. It may propose legislation. It coordinates regions. The Council has the power "to approve major changes in ... plans and policies". (Article 5(c)), which includes altering contracts. Significantly, it may choose the "appropriate

[20] For example, in the Camisea case discussed next, monthly reports have been filed focusing on compliance with such social development clauses.

contract type". It may hire consultants, nationals and foreigners, to assist its work. The proposed law sets out the membership of the Council, whose president is the Prime Minister or his/her representative, as comprising:

- Federal Government Ministers from the Ministries of Oil, Treasury, Planning, and Cooperative Development;
- The Director of the Iraqi Central Bank;
- A regional government minister representing each region;
- A representative from each producing province not included in a • region;
- Executive managers of from [sic] important related petroleum companies including the national Iraqi oil company and the oil marketing company;
- Three or less experts specialized in petroleum, finance, and economy to be hired for a period not exceeding five years based on a resolution by the Council of Ministers.

The Council shall represent all the different basic components of the Iraqi people (Article 5(c)). It is noteworthy that number 5 above seems to allow for the inclusion of foreign oil companies on the Federal Oil and Gas Council.

In accordance with the dictates of the Iraqi Constitution, the proposed Oil Law recognizes that ownership of the country's oil and gas lies in the people as a whole. Control over the resources is held by the Federal Government, producing governorates, and regional governments. The proposed law provides some idea of how control will be shared among these entities. As indicated above, representatives from each of these entities sits on the Federal Oil and Gas Council. Generally, the Federal Government seems to wield primary control over resources. Thus, the federal Ministry of Oil is the authority. The Federal Government owns the main pipelines.

The Ministry of Oil consults with the producing provinces and regional authorities in devising policies and plans. The provincial authorities feed into federal decision-making. For example, they make proposals and assist in discussions leading to the finalization of federal plans. They also play a role in licensing exploration and production. Moreover, the authorities monitor operations. The aim is to work with

the Ministry in order "to ensure uniform and consistent implementation throughout the Republic of Iraq" (Article 5(F)). The Ministry must include the producing provinces in every contract negotiation (Article 7 Operation 7). Together they take decisions on exploration (Article 8(E)). While regions have the ability to enter into contracts themselves (Article 9(A)), the Federal Oil and Gas Council may void contracts concluded by regions (Article 10(B)). Municipal and local governments may levy taxes (Article 33(3)).

In the Kurdistan region, the proposed legislation provides a process for reviewing these contracts which are to be judged with the aims of the proposed legislation in mind. The final say over the validity of the contracts lies with the Bureau of Independent Experts (Article 40(A)), which is contracted by the Federal Oil and Gas Council (Article 4(38)). With regard to other pre-existing contracts, the proposed legislation stipulates that the Ministry will review them before the Federal Oil and Gas Council undertakes a review (Article 40(B)). For both the Kurdistan region contracts and the others, the interests of the Iraqi people as a whole are to be a guiding principle.

With regard to contract choice, it is problematic to draw more than tentative observations from the proposed Iraqi legislation. The legislation provides wide latitude to the Government and its agents in designing specific contracts. It aims to choose "the appropriate contract type for the field nature or exploration area that guarantees the maximum benefits for the Iraqi people" (Chapter II, Article 5(C)). The proposed legislation presents a menu of contract types including service contracts, exploration and risk contracts, and exploration and production contracts (Chapter II, Article 9). Caution should be exercised in drawing conclusions about contract choice issues. It will be important to know both the appropriateness of contracts chosen for specific situations and also the clauses used. These decisions will become clear in time.

However, emphasis should be placed on employing contract clauses that reinforce local capacity. For example, attention must be paid to the extent to which the Iraqi National Oil Company is involved in projects. Further, untested areas obviously require ceding greater control to companies than does the exploitation of proven reserves. Political risk should not be confused with exploration risk, although it is possible that international banks may be more willing to finance projects with greater foreign private participation.

Finally, a few words on renegotiations. Legislation leaves open the possibility of honouring, renegotiating or repudiating pre-war contracts.

This flexibility also applies to new contracts that might be subject to future legislative changes. The proposed legislation states in the relevant part that:

> "The exploration and production contracts mentioned in Article 10/A must include the following: 'The contract is valid unless the Federal Oil and Gas Council objects, in accordance to this law (number of 2007). This includes the negotiation and contracting mechanisms, contracting models, and any related future changes in this concern issued by the Federal Oil and Gas Council'" (Article 10(B)).

Thus, in conclusion, the proposed legislation is noteworthy for its flexibility. For this reason, overarching statements regarding its advisability from a development perspective are difficult. It seems to err on the side of host Government discretion. At the same time, if it is in the contract formation that decisions will ultimately be made, it is important to promote transparency so as to mitigate political risk and also to foster a sense of legitimacy. Here, transparency along with public debate over contract choices and clauses could lessen the validity of criticism that decisions over Iraqi resources are made abroad.

c. Human rights and environmental legal challenges

In the legal realm, human right and environmental issues in the extractive industries are often viewed through the lens of litigation under the Alien Torts Claim Act (ATCA). Such cases have been limited recently in certain respects. Similar cases have, however, emerged internationally in the courts of Australia, Canada, Japan, India, and the United Kingdom (Baxi, 1990; Engle, 2005; Joseph, 2004; Muchlinski, 2001). The European Union is also encouraging similar routes into the courts of its Member States. Well-publicized cases that have been written about extensively have been brought against Unocal and Total and also against Chevron and Shell for their alleged roles in perpetrating human rights abuses in Burma and Nigeria respectively. The broader movement of which this litigation is a part is referred to as either "transnational public interest litigation" (Baxi, 1990; Engle, 2005; Joseph, 2004; Muchlinski, 2001) or "plaintiff's diplomacy" (Slaughter and Bosco, 2002). Essentially, it involves the use of the courts to advance human rights and environmental policies internationally. This human rights litigation appears to be gaining in popularity, despite some jurisprudential setbacks. However, in practice, human rights and environmental issues

are more often addressed by extractive industry projects through non-litigation means, that is, through contracts, voluntary codes, loan agreements and Government regulations (Likosky, 2005, 2006).

It is difficult to generalize about the extent to which projects contractualize human rights and environmental concerns. However, assumedly private international investment banks that have signed on to the Equator Principles incorporate such commitments in their project documentation. Likewise, when international financial institutions such as the IFC, the Inter-American Development Bank and others are involved in financing projects, then similar human rights and environmental documentation will be present. Further, the involvement of export credit agencies may carry with it such commitments in the project documentation. In other words, if all of the major project financiers have made commitments to incorporate these issues in the projects they are funding, then the project documentation assumedly reflects these commitments. As with even the most commercial aspects of agreements, the fact that contracts are not public makes it difficult to authoritatively assert their contents.

To illustrate the importance of non-litigation measures, this section looks at the handling of human rights with the Camisea natural gas pipeline in Peru.[21] Camisea is a transnational public–private partnership involving a multinational mix of public and private actors – domestic, foreign and international. A case-based approach is chosen because of space constraints. Nevertheless, it is possible to generalize lessons learned from the Camisea project to other oil, gas and mineral projects.

The Camisea gas project is representative of human rights and environmental practice more broadly. In this respect, four generalizable features may be identified:

Mixed transnational financing: Camisea is financed by private investment bankers, national export credit agencies and an international development bank. The involvement of each type of actor implies certain human rights and environmental conditions. For example, the United States Export-Import Bank's environmental practices, the private international banks' Equator Principles and the Inter-American Development Bank's human rights loan conditionalities are all important. The meaning of legal commitments to human rights and the environment must ultimately be understood by how they are implemented in practice.

[21] In doing so, it draws on Chapter 6 of Likosky (2006).

What we see in most projects is a common set of commitments that are applied differentially.

Mixed transnational participants: The project itself is carried out by a group of national and foreign companies. These actors are involved in varying degrees at the different project stages. Significantly, companies may themselves have human rights and environmental policies. As we shall see, Shell's policies in this regard were important to Camisea in the early stages. They are similarly important in projects internationally.

Two types of human rights: In its conception and execution, the project raises what I have classified elsewhere as two types of human rights issues: (a) positive human rights, the promise of public goods; and (b) negative human rights, the possibility that human rights will be infringed upon in the process of production (Likosky, 2006: Chapter 3) Also, consultations and participation by affected communities is emerging as an important norm in projects (Bastida et al., 2005, p. 2; Williams, 2005, p. 49).

NGO advocacy: Lastly, a group of local and international non-governmental organizations (NGOs) have chosen to target the project because of perceived environmental and human rights shortcomings. Some of these NGOs play a role in other projects internationally.

Although the relative importance of each of these features varies with country and project, they recur internationally.

The Camisea natural gas pipeline is over 25 years old. Shell and Mobil were originally involved in the project. Despite major discoveries, however, disagreements between Shell and the Government resulted in the company's withdrawal. Yet during the period of Shell's involvement in the project, human rights and environmental concerns influenced company policy.

This was mainly as a result of the campaign against Brent Spar in Nigeria that made the company recognize that "We know the eyes of the world are on us" (Watts, 1997) in adopting extensive human rights and environmental-related directives.[22] Shell's policies ranged from measures to prevent contact with indigenous communities to the vaccination of workers and local communities to biodiversity initiatives. The project involves extraction in the Nahua-Kugapakori Reserve, which is home to a number of indigenous communities including the

[22] On the Shell policies, see Dabbs and Bateson (2002).

Nahua, Kirineri, Nanti, Marhiguenga and Yine (Grumble, 2003).[23] Shell hired an anthropologist to design policies to safeguard the human rights of indigenous groups through whose communities the project would run (Chaterjee, 1997). It also hired a local NGO.

When Shell and Mobil withdrew from the project, the Peruvian Government began a search for a successor. From an environmental and human rights perspective, it was unclear what the post-Shell period would portend. Peru eventually settled on two consortia of international companies. The first would be responsible for producing the gas, and included Pluspetrol Peru Corporation (Peru), S.A., Hunt Oil Company (United States), SK Corporation (Republic of Korea) and Tecpetrol SA (Argentina). The second was responsible for distribution and was made up of Tecgas N.V.(Brazil), Pluspetrol Resources Corporation (Peru), Hunt Oil Company (United States), SK Corporation (Republic of Korea), Sonatrach Petroleum Corporation B.V.I. (United Kingdom), Tractebel (Belgium) and Grana y Montero S.A.(Peru). Gas was to be produced and then distributed to Lima for consumption and, as available, distributed internationally by Tractebel (Belgium).[24]

Camisea was regulated by the Peruvian Law for the Promotion and Development of the Natural Gas Industry. The Peruvian Energy Tariffs Commission is charged with levying tariffs. The project is carried out through a common public-private partnership contractual scheme, the build-operate-transfer (BOT) arrangement.[25] Legal services were provided for both the upstream and downstream consortia by Sullivan and Cromwell (Sullivan and Cromwell). Clifford Chance represented the Inter-American Development Bank, along with Rodrigo, Elias & Medrano. Peru was also represented by Sullivan and Cromwell, along with Miniz y Associados (Latin American Oil and Gas Deal of the Year 2004 3/05). NGOs sought to influence the post-Shell human rights and environmental practices of Camisea by targeting private international investment banks, the United States Export-Import Bank and the Inter-American Development Bank. Each targeting involved a different set of legal obligations.

[23] "Bush, the rainforest and a gas pipeline to enrich his friends", *London Independent*, 30 July 2003.

[24] www.camisea.com.pe.

[25] Under this scheme, a project company builds the project, operates it long enough to recoup sunk costs and garner a profit and then transfers it ultimately to the Government. Even during the period of nominal private control, the project is premised on a public–private partnership.

Several of the private international investment banks involved in financing the Camisea project had signed on to the Equator Principles – a set of human rights and environmental guidelines.[26] The Equator Principles apply to project finance-initiated projects costing over ten million United States dollars. Together, the banks that have signed on to the Principles represent 80% of the market. In the "Preamble" to the Principles, the banks set out their main purpose:

> "The Equator Principles Financial Institutions (EPFIs) have consequently adopted these Principles in order to ensure that the projects we finance are developed in a manner that is socially responsible and reflect sound environmental management practices. By doing so, negative impacts on project-affected ecosystems and communities should be avoided where possible, and if these impacts are unavoidable, they should be reduced, mitigated and/or compensated for appropriately. We believe that adoption of and adherence to these Principles offers significant benefits to ourselves, our borrowers and local stakeholders through our borrowers' engagement with locally affected communities. We therefore recognise that our role as financiers affords us opportunities to promote responsible environmental stewardship and socially responsible development" (Equator Principles: Preamble).

Although banks sign on to a common set of principles, they implement them in bank-specific ways. The impact and thus significance of the principles will become clear with time.[27] If a project is financed by the IFC and an Equator bank, there will inevitably be some overlap in the commitments imposed by each on the project companies.

It is early to assess the significance of the Equator Principles. In fact, Equator bank projects such as Camisea have been sharply criticized. It may be useful nonetheless to view their significance as groundwork-laying strategies: "It is much more difficult to fight and win battles at project level on issues of broad policy when such general policy is not yet clearly formulated or enacted" (Cernea, 2005, p. 75). Oil projects have increasingly come under the umbrella of the Equator Principles and at times similar IFC commitments. We can expect to see disputes

[26] On other private initiatives focusing on mining, see Ostensson (2005).

[27] Compare Sullivan & Cromwell LLP (20/03), Linklaters(2003) and Norton Rose (2003).

over IFC projects resolved in inspection panels within the World Bank Group and regional development banks.

However, it is not yet clear where disputes over the Equator Principles will be managed. Potential litigants would have to establish standing to sue, which is difficult since the general public is not a party to these agreements. The seeming absence of practical justiciability limits the legal implications of the Equator Principles. Further, the trend towards greater competition from the Government of China in funding projects may mean that the international financial institution commitments may become less significant. It does not seem at present that the Government of China will attach such human rights and environmental conditions to the projects it funds. Regardless of the financing institution, the lack of transparency at the contractual level makes it difficult to challenge particular clauses on human rights or environmental grounds; if commitments are not public, then how do we know what clauses are capable of being breached?

Camisea companies sought financing through the United States Export-Import Bank, which offers loans and other inducements for domestic nationals to travel overseas. When the Export-Import Bank was considering loans, NGOs targeted it, seeking a declination on environmental and human rights grounds. The Export-Import Bank takes these considerations into account in its lending. In international projects involving United States companies, the Bank is a major focus of human rights and environmental pressure. Other countries have similar banks. It may be that the Bank places more stringent requirements on its project lending than other banks. Indeed, this is often assumed in informal discussions. Such assumptions have not, however, been subject to rigorous, systematic empirical study. Such an assessment might be made more difficult by the fact that loan decisions take into consideration multiple factors and it is difficult to isolate human rights and environmental considerations. A related issue is the question of whether China-financed projects are less respectful of human rights and the environment in practice than World Bank ones. This is a topic that has received media attention recently. In the case of Camisea, the Export-Import Bank ultimately declined funding. Although it did not officially base its denial on human rights or environmental grounds, NGOs saw it as significant in that respect nonetheless. Camisea companies did successfully garner financial support from the export credit agencies of Germany and Italy.

Following the Export-Import denial, the front line quickly shifted to another financier, the Inter-American Development Bank, which ultimately agreed to issue (1) a direct loan for seventy-five million US dollars; and (2) sixty million United States dollars in privately syndicated loans for the project (World Watch, 2003). The United States holds a 30% voting share at the Bank. Its representative abstained from the vote on the project in part on environmental grounds (Ichniowski, 2003). Significantly, the Inter-American Bank attached many human rights and environmental conditions to its loans, financing an implementation programme. In another context, an important contractual dimension to this commitment was explained:

> "In an unprecedented move by the IDB, the failure to comply with the human rights [and environmental] conditions is grounds for default on its loans. As well, although the IDB only loaned money to the upstream component, it made its loan with the upstream consortium companies also conditioned upon the implementation of human rights [and environmental] conditions in the downstream component of the project. This condition resulted from the adjustment of several contracts 'to comply with internationally recognized social and environmental standards.' In an effort to ensure compliance with the loan conditionalities, over four hundred consultations on the environmental and human rights impact of the project were made during the design phase." (Likosky, 2005, pp. 126–127).

The ability of Camisea to realize the goals of the Equator Principles and the Inter-American Bank conditions will depend on the success of the implementation programme. It is too early to make a confident assessment. The significance of these and other soft laws in Camisea and other projects lies in both the nature of legal commitments and also in their implementation, often through the execution of contractual clauses.

7. Conclusion

An overall move away from the unequal traditional concession and towards more modern transnational public-private partnership-based contractual arrangements has occurred in the extractive sector. At the same time, the power balances of these present-day partnerships vary according to the natural resource wealth and indigenous expertise of the host state. These factors will determine the choice of contract and also the specific terms governing relationships. When looking at

issues such as contract renegotiation, Iraq's proposed oil law and also human rights and environmental issues, each of these issues relates to (1) the appropriate allocation of responsibilities and benefits within the partnership agreement; and (2) the correlation between the nature of contractually determined responsibilities and the promotion of development.

Although it is not possible to advocate for a one-size-fits-all contract for any purpose, it seems reasonable to argue that host governments should focus on maximizing revenue. One of the successes of the OPEC renegotiations was that countries were able to share experiences, and this sharing led in turn to more favourable contractual terms for all members. Arguably, the publishing of contracts broadly may serve a similar purpose. It would also perhaps lead to more effective clauses aimed at technology transfer and local training. Such clauses are to be recommended to developing countries to the extent that their negotiating strength allows. Further, in the human rights and environmental context, a need exists for the publishing of best practices. Thus, an overall recommendation might be made for transparency, subject to reasonable disclosure.

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Activities of TNCs in extractive industries in Asia and the Pacific: Implications for development *

Glenn Banks **

This article provides an overview of development outcomes from the activities of transnational corporations (TNCs) in extractive industries. Drawing on the author's experience of working as a geographer around the mines in Papua New Guinea and the global literature on the subject, the economic, social, cultural and environmental impacts of mining and resource extraction in the Asia-Pacific region are discussed. The focus of the article is the impact in the locality. The article concludes by discussing the growing influence of NGO activities and awareness of corporate social responsibility.

Keywords: Extractive industry, transnational corporations, environment, corporate social responsibility, Papua New Guinea

1. Introduction

Natural resources are increasingly the focus of development policies and plans in Asia–Pacific, as well as for the activities of transnational corporations (TNCs) operating in the region. It has been argued for some time that such activities can be the spark for national and regional development. Resource extraction can provide necessary capital and expertise and revenues through taxes and downstream processing, in addition to supplying employment, technology transfer and much-needed infrastructure. The development implications of extractive industries in the Asia–Pacific region are also some of the most controversial among regional development issues. They are controversial because they are large-scale operations, often in remote, relatively underdeveloped parts of the country that make them highly visible to local and national scrutiny, and they are also highly visible to the international community via satellite technologies. Further, they generally involve a foreign

* The views expressed in this study are those of the author and do not necessarily reflect the views of the United Nations, its Member States, or the Institutions to which the author is affiliated.

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TNC accountable to shareholders who regularly judge its activities by the standards of the TNC's home country; to make matters worse, there is now a large, international community with an interest in, and a specific focus on, monitoring their activities. All this, along with a long history of conflict and controversy, means that the relationship between the major parties involved assumes a delicacy not matched in other sectors.

It is worth remembering that all such operations have at their core a critical three-way relationship between States, communities and corporations. In reality, however, this apparently simple *trifecta* is massively complicated by the sets of values, capacities and resources that each of the major players can bring to the make-up. States, communities and corporations vary dramatically across the region, none of which are given, or static, and increasingly a range of other players are also involved who can form alliances with or oppositions to any of the three major stakeholders.

The overview of development outcomes presented below is necessarily selective, in a number of ways. It draws on both my own 18 years of experience working as a geographer around some of the large-scale mines of Melanesia, and on a huge global literature on the impacts of mining and resource extraction. While the mining sector from which most of the examples are drawn poses its own particular set of problems, oil, gas, forestry and fisheries do present certain commonalities on key parameters that allows for broader, more general statements. I emphasized geography above because this discipline uniquely provides a skill set which allows us to examine holistically the full range of development implications (economic, social, cultural and environmental) at a range of scales, from the local to the global. A final reflexive note is that the discussion below is almost exclusively centred round the localized development implications of these developments, not only because this is where my research has been concentrated, but also because the broader implications have been thoroughly canvassed elsewhere,[1] and because in my experience the most troubling issues from the perspective of sustainable development are focused on the local effects of such operations.

In some respects, a view of TNCs in the extractive industries of the region from what can appear as the peripheral perspective of mining in Papua New Guinea may seem a little odd. But Papua New Guinea now has a 35-year continuous history of hosting a number of large-scale,

[1] For Papua New Guinea, see Banks (2001).

world-class transnational mining operations, and over that time has seen the best and the worst features of such operations – from innovative forms of community participation to high-profile environmental disasters and even civil war. In this brief review of the development implications associated with these activities, I separate for the sake of convenience the local economic, social, cultural, governance and environmental impacts of mining, and identify two trends that will continue to shape the nature and form of these outcomes.

2. Local economic effects

The economic impact of large-scale resource extraction is always most extreme, in relative terms at least, at the local scale. Such operations boost local economies enormously, through direct negotiated flows of resources to communities and indirectly through various secondary economic effects. The biggest variations across the region occur with the former – the direct flows to the communities. Depending on the company, the nature and size of the operation, and the legislative regime, such flows can include one-off or continuing compensation (Banks 1998), royalties, dividends from a direct equity share in the operation (Banks 2003), 'spin-off' business contracts (Banks 2007) and employment. Papua New Guinea has been at the forefront of the development of these so-called benefit packages for affected landowner communities for 30 years now. To give one example, at the Porgera mine in Papua New Guinea, '[s]ince 1990, the Porgera landowners have received K36 million in royalties, K62 million in compensation, and K26 million in equity-related payments and dividends. This totals K124 million, but does not include a proportion of royalties paid to a trust fund (for educational purposes) or a proportion of equity-related payments that has been invested in real estate. Over the same period, approximately K167 million has been paid to Porgerans as wages, which represents around 57 per cent of the direct financial benefits received by landowners' (Finlayson, 2002, p. 36).[2] Two points of note in relation to the Porgera case are that the landowning community that has shared these benefits is fairly small, made up of perhaps 4,000 individuals,[3] and that the figures given above do not include the value of 'spin-off' business contracts from the mine to locals, the value of which was around K195 million to 2004 (Banks, 2007).

[2] Note that value of the kina over the period of the mine has ranged from parity with the US dollar up until 1994 to as little as US$0.33 in 2002.

[3] See Filer (1999), and Jackson and Banks (2002) for a history of the mine and community

The variations in the types and rates of such flows from operation to operation, even within one country let alone across the region, are enormous: in some places the returns to the affected community have been relatively small, whereas in others, such as the Papua New Guinea example given above, they can be enormous. Clearly, the nature of the agreement that local communities are able to secure, either through formal governmental processes or directly with the resource extractor, is critical. It is also important, for developmental reasons, to separate the issue of direct compensation for loss (ensuring that communities are not worse off economically, itself difficult in the context of subsistence resources) from selective, usually preferentially directed development benefits.

The economic benefits from the large-scale mines are not always positive. Two particular issues are the development of mine-related dependency and the potentially damaging effects of the benefit streams themselves. In terms of the former, the evidence from Melanesia is that communities provided with what are effectively local "resource rents" have little interest in or motivation to become involved in "productive" businesses, enterprises or even employment. This dependency, actually a rational set of economic decisions, often leads to a portrayal of the community as being lazy, tied to corrupt practices and with values directly opposed to the development of any form of sustainable development.

A second negative effect directly related to the benefit streams associated with the large-scale mines is what anthropologist Colin Filer (1990) has labelled the "social disintegration" thesis. Filer's concern, derived in the context of the closure of the Bougainville copper mine in 1989, centred on the corrosive and destructive effects of mining revenues on small Melanesian communities. These processes have their origin in the inability of traditional forms of exchange and sociality to deal with the distribution of large sums of cash, leading to internal disputes, between families and generations over the equity of patterns of distribution. Filer (1990) commented in relation to the Bougainville mine that this was because Melanesian societies simply had no appropriate traditions to draw on when it came to distributing these funds. The societies did (and in most cases still do) have a range of mechanisms for spreading the objects of customary trade and exchange (pigs, shell money, etc), but it cannot be expected that these same mechanisms will provide a basis for the equitable distribution of millions of kina in cash.

Critically, I argue that these local economic effects are at the centre of the development opportunities and problems associated with

large-scale TNC-led resource extraction. This is because it is these economic effects that drive many of the social and cultural changes outlined below.

3. Social and cultural effects

There is a voluminous literature on the local social and cultural effects of transnational mining operations. It has been pointed out recently that much of this literature relates to individual sites, is overwhelmingly descriptive, and is short-term rather than based on long-term longitudinal studies (Ballard and Banks 2003). Much is made by corporations of improvements in infrastructure (road-building, health and education) that they bring, and it is certainly true that these have been highly significant in some areas at some points in time. But there are also numerous operations where such improvements have resulted in limited or short-term benefits for communities. Rather than focus on these, however, I identify four main themes that can lead to insights that expand out from mining to other areas of resource extraction across the region. These are the processes of delineation and the construction of community, the impact of rural-to-resource migration on local communities, various forms of inequalities that arise, and finally the various social pathologies associated with mining and other forms of resource frontiers.

a. Drawing lines

Mining operations, like all resource extraction operations, are cadastral: they draw lines on maps that translate into lines on the ground. These lines become powerful instruments of social transformation because they divide groups into haves and have-nots. Communities become "landowners", "mining lease residents" or one of the score of other names used to describe communities that host mining operations. These lines effectively delineate a group with access to a range of benefits or compensation (often on the preferential basis described above) and, at the same time, another group of people or communities that have been rendered marginal in terms of the focus of the development. Much of the source of conflict around the large-scale mining sector in the region is driven as much by this creation of marginalization as it is by the distribution of benefits to the insider groups. And there is little that can be done about this, as those communities that suffer the greatest damage to land and their lives should, I believe, receive greater compensation and access to benefits than those that suffer less, often much less. The drawing of lines and the marginalization that accompanies it, then, sets

the scene for the development of both migration and inequalities, the two processes discussed below.

The cadastral metaphor is also useful in terms of talking about lines for corporate responsibility. In the Melanesian context, mining companies typically express a social responsibility focus on their mining lease landowners, then lower levels of concern with, commitment to, and responsibility for social changes among communities more removed from the mining operation (Banks 2006). Often the mine will commit some resources to (and hence assume some responsibility for) the host district and other areas where the mine has impacted (downriver systems that receive mine wastes, for example), in part at least because it is now recognized that efforts focused solely on a territorially limited community are likely to fail if the wider surrounding population is excluded.

A final use of the cadastral metaphor is in relation to the internal dynamics and construction of landowning or affected communities. TNCs, often aided and abetted by States, assume a particular form of local community and explicitly or implicitly find or "create" a community of this kind. Again, Melanesia is replete with examples of this. Under the legislation in Papua New Guinea, for example, companies are encouraged to work with a model of local "clans" – a form of social organization that assumes bounded, discrete territorial groups with distinct forms of leadership. The diversity of social organization in Melanesia, though, includes a huge number that operate on very different bases: from loose-knit ephemeral groupings to complex social landscapes with overlapping and interlocking groups that do not have any exclusive "ownership" of a particular territory. What is astonishing about the experience of large-scale mining and oil operations in Papua New Guinea is how, over time, clan-like structures have evolved at each of these sites, despite anthropological work that shows a previous absence of such forms from most of these sites.[4] This illustrates the ways in which communities actively respond to the cadastral lines that are imposed on them by redrawing the lines and structures of their own society.

b. Migration: Faces we do not know

One of the most destructive social processes for local communities associated with large-scale resource extraction is in-migration of workers, contractors and others to the areas around the projects (Banks,

[4] Golub (2007) and Ernst (1999) discuss this process at length for the Papua New Guinea situation. Ernst refers to this process as one of 'entification' – or the creation of social 'entities'.

2003). In many parts of the developing world, large-scale mines act as magnets of economic opportunity for individuals and groups from a wide catchment area, generating a neglected (in the academic and policy senses) rural–resource migration flow. In these situations, pre-existing local social structures, relationships and identities are fundamentally reconfigured, often causing severe social dislocation for the original community. Control over local environments and resources is usurped, communities are fractured and identity becomes a point of contention. It is primarily this migration that brings about the "legacy of sometimes tragic dimensions", of "dispossession, displacement, marginalization and alienation in times of rapid change" (Connell and Howitt 1991, p. 196) that is intimately attached to large-scale resource development.

In terms of understanding the processes that drive this migration in the context of large-scale resource extraction, there are three broad sets of factors that appear to have a central role. Geography is critical: in many cases the mines are easily the most significant economic activity in the province. As a result, they attract those interested in picking up employment, starting a business, engaging in the informal sector (prostitution, informal mining) or in Paul Richards' (2003) term, joining a "masterless underclass" of youth seeking excitement, entertainment and opportunity. The scale and nature of the migration are influenced by factors such as the size of the population catchment, access between the areas, the level of development in the home areas, the extent of land available in the mine area, the size of the indigenous population, and constraints on movement into or within an area.

A second group of influences are the nature of the pre-existing regional linkages between the hosts and potential migrants. Where there are extensive regional networks connecting local affected communities with their respective regional neighbours, migration of individuals from these neighbouring groups is much more likely and problematic, or at least ambiguous, for the hosts. In many of these cases, the host communities have shifted from being small marginal players in bigger regional complexes to being at the centre of critical shifting regional alliances and politics. Today at Porgera and Freeport, for example, being Ipili or Amungme is something worth arguing for.

The final set of common factors centre around the nature of the indigenous group itself, particularly rules relating to group membership and land rights. The open and inclusive nature of some residential groups makes the exclusion of kin from elsewhere virtually impossible. This is not the case across the Asia–Pacific or even Melanesia, and the

Kamoro at Freeport are one group that have a less inclusive approach to migrants (Harple, 2001; Pickell and Muller, 2001), although at the same time their traditional rules relating to land ownership are much more poorly defined. Thus, culture, like geography, matters.

Despite the variety of forms and influences, this migration results in some common outcomes. Most obviously, in virtually every case, the migrant communities have higher mine employment rates and incomes and, in local terms, a more "developed" lifestyle: they consume more of the high prestige store-bought food and less of what is regarded as the more traditional garden produce. There is also often a sense from the indigenous host communities that these migrants are a considerable obstacle, often the biggest obstacle, to the local population maximizing the benefits from "their" mine: by igniting tribal wars, introducing diseases and reducing social control within the communities, and extracting an over-representative share of the employment, business and benefit streams to which locals were entitled. Based on the evidence available, there is usually at least an element of truth to all these local claims.

c. Mining and inequality

The growth of inequality around the large-scale mining sector can be conceived of in terms of three overlapping and intersecting axes: geography, hierarchy and gender (Jackson and Banks 2002). In terms of geography, at Porgera those groups living within the Special Mining Lease (SML) have been at the centre of the economic relationship with the company, in particular receiving very large amounts of compensation. This geographic inequality has created friction within the Porgeran community. Individuals outside the SML resent the way in which they have been marginalized from the economic relationship with the company: people who were previously kin are now referred to as "enemies" because of their unwillingness to distribute their cash widely (Biersack, 2006).

Nor are compensation and royalty payments equally distributed within the affected groups. The most obvious processes at work appear to be hierarchy and gender, reflecting the continuing importance of these aspects for Porgeran society, and indeed for many other such societies in the region. In one example of the influence of existing hierarchical structures within Porgeran society, two recognized clan leaders or "big-men" directly received 75 per cent of the value of the largest compensation payment made in 1992 (K520,000) and their children were among a limited group of other recipients (Banks, 1999).

Gender also plays an important role in the distribution of money within the community. Average female income during surveys at Porgera was less than a third of average male income, a point that was resented by the women (Bonnell, 1999; Banks 1999). This is obviously a finding that is not restricted to mining and indeed is common to much of the work on development and globalization.

As a result of these geographic, social and gender patterns, substantial income inequalities exist within affected communities. The cash income associated with mine development has the effect of economically stratifying the community, although this process is typically built on pre-existing patterns of stratification. The greater wealth available to communities associated with mine development is rarely applied equally to the society: "trickle-down" doesn't necessarily provide more egalitarian outcomes among traditional societies than in economists' models of modern ones.

There is, though, another side to the inequality equation in relation to resource extraction. While mining lease communities are often the recipient of very large one-off compensation payments, regular royalty and dividend cheques, wages and other payments that by most standards in the region have made them wealthy, there are two balancing factors. First, the recipients of these payments have all suffered loss of land and massive dislocations in their lives. There is often insufficient recognition (by company staff, observers, and by migrants to the area) that the mining leaseholders' wealth has come at a cost.[5] And second, despite Filer's caution noted above, traditional norms of distribution do still operate in part to even out some of the inequalities among most of the affected communities in the region.

The Porgera case clearly illustrates broader trends in the region by highlighting that revenue streams at the community level, even enormous ones, do not equal development. Instead, strongly entrenched dependency on mine-derived benefit streams is common, along with an overwhelming focus on short-term consumption. The lesson here is that resource extraction can bring increased incomes to what are typically remote rural communities in the region, and the evidence is that absolute poverty can be brought down substantially among such communities. A more critical examination though, reveals that almost every such operation also increases inequalities along geographic and societal lines.

[5] See Bury (2005) for a similar situation in Peru.

d. Resources and social ills

Much of the literature on the social and cultural effects of mining focuses on the social pathologies of such resource extraction. Increasing levels of alcoholism, prostitution, vagrancy, gambling, violence (including domestic violence) and lawlessness are in many respects the "poster issues" associated with transnational resource extraction operations in the region. These are the issues that capture the headlines when highlighted by external observers, in part because of the associations of these issues with historical resource frontiers in the West. Indeed, these "pathologies" often become such a dominant focus that they can obscure examination of broader issues. And while they are certainly critical, there are two cautions that need to be kept in mind when discussing such social ills. First, they are not necessarily the dominant changes from the point of view of the communities affected. At Porgera, for example, the impact of migration for the local community has been profound, primarily because of the effects on social relationships and identity, and not because of the more obvious connections with increasing alcoholism, prostitution and violence. Second, the resource extraction project often becomes the focus of blame for broader processes within society.[6]

In the context of efforts to promote sustainable development, the above review offers a gloomy picture. Perhaps most importantly, it signals the breadth of issues which concern communities – it is not just new infrastructure and cash but also the issues around sociality and loss of control that are of central concern. The other feature of note is the dynamic nature of these large-scale resource projects – it is difficult to plan secure futures for communities when the playing field is constantly changing so drastically. In the case of the Porgera mine, the original 1989 mining plan has been enlarged and revised to such an extent that the landowner communities originally relocated for the mining development must now be moved again to accommodate the mine expansion. This places a particular responsibility and a challenge on governments and corporations to develop flexible and responsive programmes that can deliver sustainable benefits to communities in the face of this medium to long-term uncertainty.

Intimately linked to the social conditions for communities around resource extraction projects are the presence and practices of security

[6] The spread of HIV/AIDS in the Melanesian context, for example, is not connected in any simple way with resource frontiers and projects, and in the general sense projects are not isolated from other national or even international social and cultural changes.

forces. The record on this score is not good in Asia–Pacific as elsewhere. Human rights abuses around resource projects are well documented in a number of countries in the region, particularly where the security forces become closely linked to resource revenue streams.[7] The obvious need for the State to protect the revenue flows they obtain from the sector, too, often results in the over-zealous trampling of rights of local communities and abuses by state and corporate security forces. This requires States to carefully and responsibly consider the broader governance and developmental context, and in particular flags the need to address the issue of how to respect the basic human rights of communities affected by projects where these same projects often have regional and national economic and political significance.

4. Local governance

While much of the focus of the resource extraction debate is on the relationship between the community and the TNC, local governance issues (such as human rights as touched on above) are critical to the ultimate condition and situation of the community. A major problem with governance in this context is the natural tendency of both community and State to rely on the TNC to assume many of the "governmental" roles around the operation. It is the corporation that has the resources and capacity and skill-sets on-site to undertake a governmental role, and they regularly become the focus of community expectations for service provision. Examples of derelict Government buildings, staffed – if at all – by under-resourced junior officers with poor and infrequent links to budget funding are common around major resource projects, despite the fact that these projects make enormous economic contributions at the national level.

One response to this in Papua New Guinea has been the development of a tax credit scheme, whereby companies are able to deliver infrastructure and services to local communities in return for taxation credit from the national government. The company effectively does operate like a State from the community perspective. The danger of this approach, obviously, is that it does little to build local government capacity and poses even greater problems for communities once the project is finished. In conditions where the very obvious presence of the corporation and its resources is many times larger than a Government presence, the key is to facilitate and improve capacity for service delivery rather than abdicate responsibility for them.

[7] Freeport is an obvious example here – see Ballard (2002).

In recent years, these trends have not been helped by the dominant regional policy approach leaning towards State reduction and decentralization. Such neo-liberal attitudes in this sense feed into the problem of a reduced State presence. I would argue that the local, regional and ultimately national development implications of these large-scale projects are so critical to the development trajectories of the nations that they cannot be left to corporations to manage. One approach currently being promoted in Papua New Guinea is the use of Special Purpose Authorities to coordinate and intervene more actively in the delivery of government services and direct the developmental paths of the affected communities (Simpson, 2002). Another approach more in tune with the current development climate is to acknowledge that there are real limits to what is achievable through a focus on local governance alone, and to instead highlight economic development. Here, the argument is that government will follow economic development, not vice versa; hence the development of sustainable local economies that will continue after the end of the project is the best way to secure ongoing government service delivery.

Complicating the question of governance is the fact that the large-scale projects also create new players in the national polity, with local communities and representative bodies often gaining a national visibility and political clout that exceeds their size. In the Melanesian context, and probably elsewhere, such representatives and groups frequently become very adept at securing benefits through strategic (some would say opportunistic) lobbying, effectively bypassing attempts at more rational development planning and governance.

5. Local environmental effects

In many respects, the environmental aspects of large-scale resource extraction are the most obvious and significant, as well as being very well publicized.[8] Controversies linked with the large-scale mines in Melanesia largely revolve around the environmental impact of their waste management strategies on the communities living downstream of the mine. Sites such as Ok Tedi, Bougainville and Freeport have become emblematic labels for the environmental excesses of large-scale transnational mining capital in the region generally. They have generated lawsuits, corporate soul-searching and, in the case of Bougainville, armed rebellion. The large mining operations regularly move over 100,000 tonnes of material a day and can destroy thousands of hectares of land through digging it up and then depositing it elsewhere in waste dumps

[8] See for example, Paull et al. (2006).

and rivers systems in the form of tailings. The physical and chemical impacts of tailings on riverine systems are also well documented and often long-lasting.

If, however, we are to fully understand the impacts on and responses of the peoples affected, there is a need to distinguish between these impacts on the physical environment and the broader effects of the mines on people's lives: we need to look beyond a simple discourse of "ecological crisis". Such an alternative view would place the responses in their broader social, cultural, political, environmental and economic context, and when this is done, community reactions and initiatives in Melanesia at least can be viewed as being fundamentally concerned with control over resources (Banks, 2002). In many cases, the control sought is expressed in terms of relationships – and particularly with regard to potential or unrequited reciprocity (Kirsch, 2001) – grounding the disputes squarely in a fundamental aspect of social relations within the region.

A more robust and widely applicable framework than that of "ecological crisis" would examine the way in which control over a range of resources is affected by these mining operations. Resources in this context can be taken to be those material or socially constructed elements that communities are able to utilize to sustain (or improve) themselves (physically, culturally and socially). This approach parallels the literature on livelihoods (eg. Bryant and Bailey, 1997), in which political ecologists are increasingly incorporating the notion of environment into a framework centred on human livelihoods.

There are two consequences of such a definition. First, it allows us to incorporate both subsistence resources derived directly from the natural environment and other material resources, such as cash crops and wages. Communities do make choices, albeit constrained ones, and often the desires for their own visions of modernity can outweigh any environmental negatives associated with resource developments. Second, other socially and culturally constructed resources can also be incorporated into such a definition. These can include cultural attachments to land, place, and local landscapes and environments (critical elements in many remote communities throughout the region); political resources at both local and super-local levels; and social resources such as relationships, systems of rights and responsibilities within a community. An emphasis on the inter-relationship between the "real" and the constructed nature of these resources highlights the way in which control over resources is rarely simple or stable. Incorporation of communities into wider spheres of influence, for example, can easily

see a local group lose political control over its own future, although it is also possible to see elements of the reverse process at work, with local groups achieving a far more prominent voice over their own future.

In part, this debate becomes one of semantics. The use of the terms "ecological" and "environmental" has a particular resonance within developed countries, of an environment and ecology separate from society. To understand community responses to large-scale resource extraction in the region requires dropping the essentially Eurocentric divisions between the environment and the daily lives of those affected: people in many of these communities do not make the same distinctions between environmental and "other" resources. Their environmental consciousness is more holistic, and fuses the social, cultural, political, economic and environmental in a way that does not occur in the developed world. Instead of portraying this as a debate between environmental or economic explanations of conflict, we need to recognize that for these communities, the environmental *is* economic, but it is also social and political life and cultural sustenance.

6. Conclusion: trends in the region

In conclusion, there are two trends that I would like to highlight that are affecting the developmental implications of TNCs. The first is that thanks to satellite technologies and an international community that specifically monitors and seeks to shape transnational behaviour in the resources sector, resource projects throughout the region have come under much closer scrutiny. In particular, the environmental impacts of various mines on local communities have created the conditions that allow these communities to access political, legal and media resources in the international sphere. Community complaints over environmental issues may then be symptomatic of wider problems. When such objections are framed as "environmental" or "ecological" issues, the people affected and their supporters – national and international – are able to tap into a strong vein of environmental rhetoric that is more readily accepted and thus more likely to attract support in the developed world than a discourse of community development and livelihoods. The growth of civil society groups in the countries of the region, in tandem with support from the international NGOs, will also lead to greater levels of scrutiny from within the country. This is not necessarily problematic for the affected communities – indeed, it can result in significant benefits – but it can mean that the nature of the issues and the construction of problems they face are driven from the outside and may not match their central concerns.

A second trend that has similar effects is the growth of concerns with corporate social responsibility (CSR). This evolving field is leading to the refinement of corporate attitudes towards community engagement, and shaping and sharpening approaches to the developmental responsibilities that they assume. In tandem with the flexible notion of "industry best practice", one of the implications of CSR is that it is frequently easier for national governments to align the activities of domestic resource extraction companies with their development policies than those of TNCs. What these two trends have in common is the way in which they create a tension between national developmental imperatives, and international forces. Sovereignty in the sense of control over the actions and outcomes of these operations is thus being contested by these rapidly evolving pressures from international surveillance and TNC corporate social responsibility standards.

Large-scale resource extraction, driven by TNCs, will continue to be part of the development agendas of many countries in the region. Rather than try and summarize the complexity outlined above, I will conclude on a rather academic point, one which I feel is critical to both understanding the industry and its developmental effects. This is that while natural resource industries are incredibly material, visceral industries – they make big holes and big messes, utilize lots of large machinery and throw huge amounts of money around – much of the developmental "work" of such operations is in the realm of words.

The complex "reality" of mining occurs in what we can refer to as a complex, multi-layered "discursive field" – the world of words. Global discourses of "sustainable development", for example, shape the actions and the words of multinational miners – they determine the sorts of responsibilities that companies are willing to assume at any particular point in time. I discussed above the ways in which the discourse of environment has opened up possibilities for new players – particularly international NGOs – to become involved in shaping the sector. Likewise, the presence of a large-scale resource extraction project creates new opportunities for local communities to re-imagine and negotiate their development expectations.

In the face of the bulldozer and dump-truck this may seem academic thumb-twiddling, but it is also a critical point in terms of engaging with the sector. There is much that has been said and written about the activities of TNCs, but much of this is ideologically driven and seeks to shape rather than reflect the realities of these activities. Rather than shadow-boxing with the rhetorical claims of communities and corporations, States in the region would do well to seek a fuller

engagement with the realities that make up the lives of the affected communities, to get to know what drives their responses to change and development. Words in this instance matter but by themselves they are not enough, and their meanings are often not as they appear.

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The role of TNCs in the extractive industry of Botswana

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This article reviews the involvement of transnational corporations (TNCs) in the extractive industry of Botswana and the role of government policy that has governed its development. First, it reviews the trends and determinants of TNC involvement in various sub-sectors of mining. Then it assesses the economic, environmental and social impacts of mining, which have been largely positive in Botswana. To identify the factors contributing to the success, the article describes the government policy and involvement in the extractive industry. The article concludes by offering some recommendations.

Keywords: Botswana, mining, transnational corporations, policy

1. Introduction

Extractive mineral industries have played a crucial role in the development of Botswana, and transnational corporations (TNCs) have played an important role in the development of Botswana's mining sector. As a result of mineral-led economic growth, the country has been transformed from one of the poorest countries in the world at the time of independence in 1966 to an upper-middle income country. Botswana's main mineral export is diamonds, of which it is the world's largest producer in value terms. Other important mineral exports include copper and nickel.

As has been well documented, mineral producing countries are often afflicted by a "resource curse", which has often led to lower growth than in non-resource countries, and a range of other economic, social and political problems. Botswana's record of mineral-led development is remarkable not just for its rapid growth, but for apparently avoiding most other aspects of the resource curse. The country is relatively free of the corruption and environmental damage that is often associated with mining industries. Public finances are strong, debt is minimal, and the country enjoys investment-grade credit ratings.

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TNCs have played a central role in Botswana's mining sector development. Although the Government has studiously avoided the worst aspects of "resource nationalism", and has never nationalized mining companies or attempted to run mining operations itself, it has entered into long-term partnership with mining TNCs, with the Government enjoying an ownership stake in all major mining operations and carefully worked out revenue- and risk-sharing agreements. In doing so, it has taken a long-term view, promoting private-sector investment in the mining sector, and ensuring that it is itself well-resourced when entering into negotiations with mining TNCs. As a result, it has been able to enter agreements that have given Botswana considerable benefits. Botswana's approach has not been based on offering low-tax incentives, but on a stable, open and transparent policy regime, free of corruption and political interference, that allows investors freedom to operate once agreements have been reached.

Botswana has earned considerable revenues from minerals, leading to favourable balance of payments and fiscal positions. It has also paid a great deal of attention to how these revenues are spent, with an overriding objective of devoting mineral revenues – derived from the sale of a non-renewable asset – to investment in other assets (economic, social and financial) that will help to generate future economic growth. Significant financial reserves have been built up that enable the economy to ride out the economic shocks that inevitably accompany reliance on a narrow range of mineral commodities. The Botswana experience has considerable relevance for other mineral exporters, and these are developed at more length in this paper.

2. Trends and determinants of TNC involvement in Botswana's mining industry

a. Overview of the mining industry

Botswana's history of post-independence economic growth has been integrally linked to the development of the minerals sector, and to investment by TNCs. Although there was little mining activity prior to independence in 1966, it was known that there were deposits of copper, soda ash and coal, and there was thought to be considerable long-term potential in exploiting these minerals. Diamonds were discovered shortly after independence, and the construction of copper-nickel and diamond mines began in the late 1960s. Production of both minerals began in the early 1970s. Diamond production continued to grow rapidly, with the initial mine at Orapa supplemented by two more mines at Letlhakane

and Jwaneng. During the 1970s and 1980s the country emerged as one of the world's major diamond provinces, and by the late 1980s, it had become the world's leading diamond producer, measured by the value of production.

Mining has come to dominate the economy, accounting for around one-third of GDP, one half of government revenues, and nearly 90% of exports. GDP growth has been rapid, led by mineral sector development, and over the 30 years from 1970 to 2000, Botswana was the fastest-growing economy in the world. The structure of the economy has been transformed; at independence in 1966, agriculture (mostly cattle-rearing) accounted for 40% of GDP, while mining was virtually non-existent; by 2006, agriculture accounted for only 2% of GDP and mining 40%. FDI has played a crucial role in this mineral-led growth, reflecting both the lack of domestic resources in the early years of the mining industry and the Government's general development philosophy of attracting foreign investment.

Besides mineral production, a great deal of mineral exploration activity is being undertaken in Botswana. Prospecting in Botswana is difficult, as much of the country is covered with the deep sands of the Kalahari Desert, and minerals located in the underlying bedrock have historically been difficult to find. Many conventional prospecting techniques have been expensive and not particularly effective, making the Kalahari one of the most difficult on-shore terrains to exploit. However, recent technological developments in the prospecting field have changed the situation. In particular the advent of airborne gravity detection techniques measure minute variations in the earth's gravitational field caused by the presence of minerals, allows geologists to see "through" the deep Kalahari sand cover, revealing underlying geological features. This supplements earlier aero-magnetic techniques, which measure variations in the earth's magnetic field caused by mineral deposits. Earlier prospecting was reliant on soil sampling and the detection of indicator minerals. These developments have encouraged further prospecting, and the number of prospecting licences has continued to rise, increasing the prospect of further significant mineral discoveries.

b. The role of TNCs in specific mineral activities

The development of Botswana's minerals sector has been integrally related to the role of TNCs. As noted above, the sector began to develop soon after independence in 1966. At that time, it was recognized

that "the exploitation of these resources must depend upon foreign capital investment, and the promotion of a satisfactory climate for such investment is clearly of the greatest importance".[1] This approach, of welcoming FDI through a supportive investment climate, supplemented by measures to ensure a range of benefits for the Botswana economy, has characterised the development of the minerals sector ever since.

(i) Copper-nickel

The first major investment in Botswana's mineral sector was by Bamangwato Concessions Ltd (BCL), established in the 1960s to develop the copper-nickel ore bodies at Selebi-Phikwe.[2] BCL operates three linked copper-nickel mines in the Selebi-Phikwe area of north-east Botswana, and an associated smelter producing copper-nickel matte, which is sent abroad for refining. The development of the mine required significant investment in associated infrastructure. This included the establishment of a new town at Selebi-Phikwe, the Shashe Dam and associated water pipelines, a diesel power station, roads and a rail spur. All of these were provided by the Government, with a loan from the World Bank. The total investment required for the mine, smelter and associated infrastructure was around P160 million (then $220 million), equivalent to around 150% of GDP in 1968/69 (Harvey and Lewis, 1990, p. 137). The establishment of the project provided a huge economic impetus and boost to GDP through construction and related expenditure.

BCL is a large mining operation by world standards, and is the second largest private sector employer in Botswana, with around 4,000 employees. However, initial expectations that it would be a highly profitable and lucrative venture for both Botswana and the shareholders were dashed from the early stages. The project was planned during a period of high metals prices during the 1960s, but came on stream as prices fell sharply in the early 1970s. This, combined with operational problems at the smelter and delays in commissioning, caused the project to incur substantial losses from the beginning. BCL has never operated profitably, and the shareholders have incurred significant financial losses, as have the main lenders to the project.[3] Nevertheless, the Government

[1] See Overseas Development Ministry, 1965, p.104

[2] The ultimate owners of BCL were initially Anglo American Corporation of South Africa (Anglo) and American Metal Climax (AMAX) of the United States, along with public shareholders and a small shareholding held by the Botswana Government.

[3] Despite its financial problems, BCL has continued to operate, and has received significant financial support from the Government of Botswana. The original shareholders have divested their shareholdings, and the Government is now the largest shareholder.

considered it socially imperative to keep BCL in operation due to the social costs that would result from its closure. Only in 2005, after the sharp rise in copper and nickel prices, the mine was able to make an operating profit.

Other copper-nickel mining operations in Botswana include the Tati Nickel Mining Company (TNMC), which operated the Selkirk underground and Phoenix opencast mines near Francistown, and was owned by Anglo American. Anglo sold its shares to the Canadian company LionOre at the same time as it divested its shareholding in BCL.[4] While the Selkirk deposits have been exhausted and the mine placed on a care-and-maintenance basis, the Phoenix mine is being expanded. Concentrate from Phoenix is toll-treated by the BCL smelter at Selebi-Phikwe.

(ii) Diamonds

Diamonds are currently mined in Botswana by Debswana, a 50-50 joint venture between the Government and De Beers Centenary AG. De Beers first began prospecting for diamonds in Botswana in 1955, after a few diamonds were found in the gravel bed of the Motloutse River.[5] The Orapa kimberlite pipe was eventually found 12 years later, in 1967, just after Botswana's independence.[6] Although the pipe was large, it was not thought to be particularly valuable, and as the Government was fully occupied with the "Shashe project" and establishing the Selebi-Phikwe mine and town, it agreed to let De Beers develop the Orapa diamond deposit alone; the Government's involvement was limited to a 15% shareholding in the mine. Construction of the mine began in 1969, as a simple opencast pit, and production began in 1971. Over the subsequent few years, however, further diamond discoveries were made in the area which led to a doubling of production at Orapa and the opening of a new mine nearby at Letlhakane. In 1976, De Beers announced that it had discovered another major diamond pipe at Jwaneng, further to the south;

A residual public shareholding remains, but the shares (in Botswana RST, the holding company for BCL) are no longer quoted or traded, and are essentially worthless.

[4] LionOre, an international producer of nickel concentrate with operations in Botswana, South Africa and Australia, was taken over by Norilsk Nickel (Russian Federation) in mid-2007. Currently, the Government has a 15% shareholding in TNMC, with Norilsk holding the remaining 85%.

[5] While it was known that these diamonds had been brought downriver from a source kimberlite pipe, locating the pipe proved to be difficult, as the course of the river had shifted over the years and its (unknown) original source was located under the sands of the Kalahari Desert, which can be up to 200m deep.

[6] See Hart, 2001, for more details of the discovery of diamonds in Botswana.

mine construction began in 1979, and full production was reached in 1982. Although the Government's initial shareholding was 15%, the new discoveries opened the opportunity for government to negotiate an increased shareholding, which rose to 50% in 1975.

The Government's relationship with De Beers, however, goes further than the joint venture partnership of Debswana. During the 1980s, the international diamond market was weak, and Debswana could not sell all of the diamonds it was producing. As a result, the company accumulated a significant stockpile of unsold diamonds. When the market recovered, after 1986, Debswana negotiated the sale of the stockpile to De Beers. In exchange, Debswana was paid partly in cash, and partly in shares in De Beers. Following this transaction, Debswana achieved a 5% ownership stake in De Beers, and had the right to appoint two directors to the main De Beers board. The Government of Botswana, through Debswana, thereby got access to high-level information regarding the operation of the global diamond industry. All of Debswana's diamond production is sold to De Beers marketing arm, the Diamond Trading Company (DTC), based in London.

De Beers' origins lie in the South African diamond industry, which it came to dominate early in the 20th century. Over time, De Beers came to dominate the global diamond industry, through combination of its own mines (wholly or partially owned), and its marketing of diamonds from other producers. At its peak, De Beers was responsible for the marketing of more than two-thirds of global rough diamond production, and exerted significant control over pricing. This structure enabled diamond producers to earn monopoly profits, and as a major producer, Botswana managed to negotiate a very favourable revenue distribution arrangement with De Beers (described below), which gave Botswana a share of these monopoly profits.

For most of this period, De Beers was a public company, listed on the Johannesburg and London Stock Exchanges, although with a major block of shares held by Anglo American. In 2001, De Beers was restructured, and became a privately owned company. As a result, the ownership of De Beers changed to: Anglo American (45%); Central Holdings (Oppenheimer Family) (40%); and Government of Botswana (15%). The restructuring gave the Government an even greater say in the operations of De Beers, and access to significant dividends from De Beers' profits.

Besides its involvement in diamond mining through Debswana, De Beers plays several other roles in Botswana's mining industry. De

Beers Prospecting carries out extensive prospecting activities throughout the country, either alone or in partnership with other prospecting companies, making use of a variety of exploration techniques, and has pioneered innovative methods of exploring for minerals under the deep Kalahari sand cover. All of Debswana's diamond production is sold to De Beers marketing arm, the Diamond Trading Company (DTC), based in London. De Beers and the Government of Botswana are also joint owners of the Botswana Diamond Valuing Company (BDVC), which sorts and values all of Botswana's diamonds, prior to their sale to the DTC. In 2006 it was announced that De Beers would also establish a branch of the DTC in Botswana, to undertake sorting and aggregation activities for diamonds sourced from other parts of the De Beers group. Botswana will thereby become a key centre for the sorting and selling of diamonds in the De Beers global network, and it is hoped that this will support the emergence of a larger diamond cutting and polishing industry in the country.

Although De Beers have traditionally dominated diamond production in Botswana, it is not the only company involved in diamond exploration. Other TNCs (including Falconbridge, RTZ etc.) have been involved in exploration, but have not brought any discoveries to the production stage.

(iii) Gold, soda ash and coal

Gold has been mined in Botswana for several hundred years, with many old mine workings identified in north-east Botswana. Botswana's gold deposits were relatively small and difficult to mine, and attention soon turned to the much richer South African gold deposits on the Witwatersrand. However, in 1998, Gallery Gold, a small Australian company, discovered a substantial gold deposit at Mupane. Production began in 2004, and now averages around 250kg of gold a month. In 2006, Gallery Gold was taken over by a major international gold mining company, Iamgold (Canada).

The brine deposits of the Makgadikgadi Pans have long been known as a potential source of soda ash and salt, although the remoteness of the area and lack of infrastructure deterred investment for many years. In 1991, Soda Ash Botswana (SAB) was established as a joint venture between three major South African companies – AECI, Anglo American and De Beers – and the Government of Botswana. However, due to financial difficulties, a new operating company was formed – Botswana

Ash – which is 50% owned by the Government, 21% each by De Beers and Anglo American, and 8% by financial institutions.

Botswana has extensive coal deposits, which were first prospected during the 1950s. Mining began in the 1970s. The only operating coal mine is the Morupule Colliery, near Palapye, which has as its main customer the adjacent Botswana Power Corporation (BPC) power station. Morupule Colliery is a subsidiary of Debswana. Botswana's other main coal deposits are at Mmamabula, south of Mahalapye and extending east to the border with South Africa. The combined Morupule and Mmamabula coal deposits amount to some 17 billion tonnes, giving Botswana the second largest coal reserves in Africa, after South Africa. Consideration is now being given to a possible power station on the Mmamabula coalfield, to generate electricity for export to the South Africa.

Extensive exploration and prospecting is taking place, and several new mining operations are likely to be established in the next few years (Annex 1).

c. General trends in the ownership of mining companies

As is evident from the above description, the nature of TNC involvement has changed over the years. Initially, major companies (especially De Beers and Anglo American) were the key drivers of the industry, in partnership with the Government. More recently, smaller companies have become more prominent. Much of the activity of the smaller companies is based in revisiting mineral deposits that were in the past prospected by the majors but which were not then considered viable.[7] There are a number of reasons for this. Prices, markets and production techniques may change, and make the exploitation of a deposit viable even if it was not viable at some time in the past. New prospecting techniques may enable a more accurate assessment of the value of a deposit. In addition, major TNCs tend to focus on large-scale projects and have less interest in smaller deposits, whereas smaller mining companies can exploit smaller deposits more profitably. It is also a general characteristic of the minerals industry worldwide that much of the exploration and early stages of mine development is done

[7] Diamonex and African Diamonds are both developing mines based on deposits that De Beers initially prospected and then allowed to lapse. Similarly, African Copper is establishing a mine on a deposit at Dukwe that was earlier prospected by Anglo American and Falconbridge, but never developed. CIC Energy is intending to develop the Mmamabula coal fields that were earlier prospected by BP and Shell.

by junior mining companies, who may then enter into a partnership, or sell out completely, to a major once a viable mining project has been identified.[8]

The ownership of major mining projects in Botswana can be summarized in table 1. Many of the companies engaged in mining and prospecting in Botswana have been listed on the Botswana Stock Exchange (as dual listings given that their primary listings are in London, Toronto or Australia). This gives the Botswana public and investors an opportunity to take an ownership stake in these mining projects. This is particularly important for Botswana institutional investors, such as pension funds, which otherwise lack sufficient opportunities to acquire local investments.

3. Impacts of mining on development

Mining has had a significant impact on development in Botswana. It has contributed massively to economic growth, rising per-capita incomes, balance of payments surpluses, and government revenues. The latter have in turn been used to finance a wide range of social and economic infrastructure, including roads, water supplies, education and health – including the most comprehensive response to HIV/AIDS in Africa – as well as social services and welfare support schemes.

a. Impact on growth

The impact of TNCs on the Botswana economy is integrally linked with the impact of the mining sector as a whole on the economy, as all mining companies are either wholly-owned by TNCs or operated as joint ventures with the Government. This impact has been extensive, notably on key macroeconomic indicators of GDP growth, exports and government revenues.

[8] In the case of the Diamonex mine, it is believed that De Beers prospecting results were affected by theft of stones from bulk samples. Renewed prospecting and sampling, with tighter security, revealed higher grades than De Beers had found, making a small mine viable. In the case of the AK6 pipe near Orapa, earlier prospecting by De Beers underestimated the surface area of the kimberlite pipe, which was more accurately identified by African Diamonds, which picked up the prospecting lease that De Beers had allowed to lapse. Higher copper prices have made the Dukwe deposit viable to mine, which was not the case in the 1970s. The viability of coal mining at Mmamabula, which will be used to generate electricity, reflects a regional electricity shortage and rising prices, whereas twenty years ago there was a regional surplus of electricity.

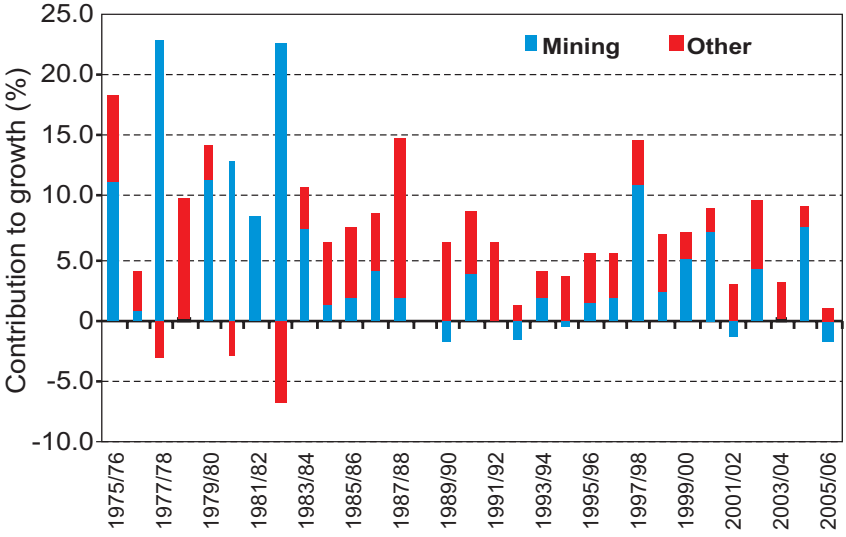
Table 1. Ownership of mining companies in Botswana

Company	Mineral	Nature of Ownership	Main Mines or Prospective Mines
Companies with Mining Licences			
African Copper	Copper	African Copper (UK*¤)	Dukwe
BCL	Nickel, copper, cobalt	Public & misc. 38%; Norilsk Nickel (Russia) 29%; GoB 33%	Selebi-Phikwe
Diamonex	Diamonds	Diamonex (Australia# *) 100%	Lerala
Debswana	Diamonds and coal	De Beers (private†) 50%; GoB 50%	Orapa, Jwaneng, Letlhakane, Damtshaa (diamonds); Morupule (coal)
Tati Nickel	Nickel, copper, cobalt	Norilsk Nickel (Russia) 85%; GoB 15%	Phoenix
Mupane Gold	Gold	Iamgold (Canada‡ *) 100%	Mupane
Botswana Ash	Soda ash & salt	Anglo American (21%); De Beers (21%); GoB (50%); banks (8%)	Sua Pan
Companies likely to establish mines over the next 5 years			
African Diamonds	Diamonds	African Diamonds (UK*¤) 100%	AK6 (Orapa)
Discovery Metals	Copper, nickel, silver	Discovery Metals (Australia# *¤) 100%	Maun (copper); Dikoloti (nickel)
Meepong Resources	Coal	CIC Energy Corp. (BVI/ Canada* ‡) 50%; International Power plc (UK@) 50%.	Mmamabula

Notes: * listed on the Botswana Stock Exchange; ‡ listed on the Toronto Stock Exchange; #listed on the Australian Stock Exchange; ¤ listed on the Alternative Investment Market (AIM), London @ listed on the London and New York Stock Exchanges; † Ownership of De Beers is Anglo American (UK) (45%); Central Holdings (South Africa) (40%); Government of Botswana (15%)

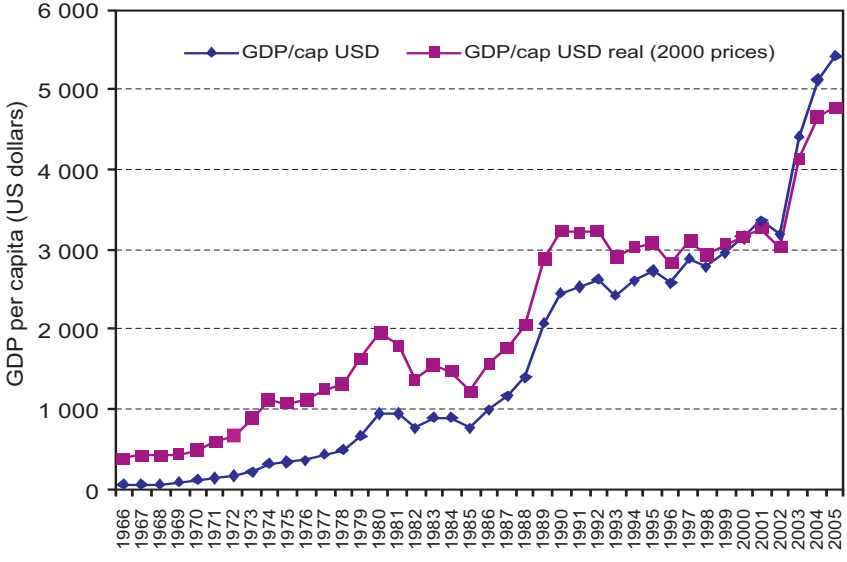
Over the period 1975–2006, the mining sector has directly contributed 44% of Botswana's total GDP growth, although the contribution was much higher in the early period when the diamond sector was growing rapidly (figure 1, table 3). The total (direct and indirect) impact of the mining industry is even greater, as its contribution to government finances has enabled the rapid expansion of government activities, which itself has further impacted on other sectors, especially construction. The rapid growth of mining has underpinned the increase in per capita incomes, which rose from $76 at independence in 1966 to $5,500 in 2005/06 (figure 2). In real terms, per-capita GDP grew by tenfold over this period, at an average annual rate of 6%, transforming Botswana from one of the poorest countries in the world into an upper-middle income country.

Figure 1. Contribution of Mining Sector to GDP Growth, 1975-2006



Source: CSO

Figure 2. GDP per capita



Source: IMF

Table 1. Contribution of Mining Sector to GDP Growth

	1975-85	1986-1995	1996-2006	1975-2006
Mining	73.6%	20.4%	49.0%	45.6%
Other	26.4%	79.6%	51.0%	54.4%

b. Impact on exports

Minerals have had a similar impact on exports, which rose from $15 million in 1969, to $4,400 million in 2005. Diamonds and copper-nickel accounted for an average of 86% of total exports over 2001–2005. The strength of mineral exports has enabled Botswana to run current account and balance of payments surpluses, and to accumulate substantial foreign exchange reserves. At over two years of import cover, Botswana's foreign exchange reserves are amongst the largest in the world relative to the size of the economy, and a major factor in enabling the country to earn an investment grade credit rating – the highest of any country in Africa – from the rating agencies, Moody's and Standard & Poors.[9]

c. Impact on government finances

Minerals are also a crucially important source of revenues for government. From zero in the 1960s, minerals grew to a peak contribution of to contribute around 60% of total government revenues, although this has now declined to around 40%. Total government revenues have grown from under 30% of GDP to average around 40%, enabling a major increase in government spending while still permitting a budget surplus in most years. Most of the mineral revenues paid to the Government are from diamond mining.

d. Impact on employment

While mining has had a substantial impact on GDP growth, the balance of payments and government finances, its direct impact on employment has been smaller. The sector is relatively capital-intensive and mining activities employ only about 9,200 people, or around 3% of the employed labour force.[10] Its contribution to total wage income is greater

[9] The rating reports from Moodys and Standard and Poors can be found at *www.bankofbotswana.bw*.

[10] Mining companies employ somewhat more than this, as employees not directly engaged in mining activities are classed into other economic sectors.

than 3%, as mining jobs tend to be relatively well paid. The sector has also contributed to human resource development. For example, Debswana has had an intensive training and apprenticeship programme, and also offers scholarships to employees to study for advanced qualifications both within and outside of Botswana. Many of these employees have subsequently left the company and thereby provide a skilled resource available to other economic activities. The specialized skills required by the mining sector have been provided both through training carried out or sponsored by the mining companies themselves, and by government.[11] While local educational institutions tend to focus on general training, e.g. in science, geology and engineering, the Government has sponsored large numbers of students to take more specialized courses abroad. A new university currently being established is planned to provide more specialized training in science, engineering and technology.

The propotion of expatriate workers has been fairly stable over the past 20 years, although it fell from 5.6% in August 1984 to 4.2% in September 2006. While total employment in the mining sector rose by around 30% over this period, the number of expatriates remained stable. This suggests that citizens have increasingly been trained to take up skilled positions over the years. The main employment impact of the mining sector has been indirect, through the revenues contributed to government. Government is by far the largest employer in the country, employing over 40% of the employed labour force, and this is only possible on the basis of revenues received from the mining sector.

e. Indirect impacts

Besides the financing of a wide range of government activities, the main indirect impacts of the mining sector have come through the provision of infrastructure and urban developments. Several towns in Botswana (Selebi-Phikwe, Orapa, Jwaneng, Letlhakane, Sowa) owe their existence exclusively or mainly to nearby mining activities. These towns account for around 10% of Botswana's urban population.Wages paid to mining employees, and purchases by mining companies, provide the basis for secondary economic activities in these locations. The mining sector has also provided the impetus for the development of water and power supplies, and of road and rail infrastructure.

The major mining companies (BCL and, especially, Debswana) have invested extensively in health and education facilities in their communities. Both companies operate hospitals which are open to both

[11] Between 1992 and 2005, Debswana provided scholarships to 1,500 students, including both company employees and the general public.

company employees and the general public. Debswana has been active in responding to HIV/AIDS, and was the first company to provide anti-retroviral therapy (ART) to employees and family members, free of charge. Debswana's hospitals at Jwaneng and Orapa now have specialized Infections Diseases Care Centres, which provide ART and related treatment in partnership with the Government of Botswana to local communities. Other social initiatives undertaken by Debswana include the provision of significant urban infrastructure, such as airstrips, roads, housing and water supplies; the funding and management of primary and pre-primary schools; the establishment and management of game parks; the establishment of the Harry Oppenheimer Okavango Research Centre in partnership with the University of Botswana for the study and conservation of the wetland ecosystem in the Okavango Delta; the funding of a venture capital fund (Peo) that provides finance for the development of business projects owned by small and medium size entrepreneurs; a donations fund providing over $1 million a year to deserving causes and organizations.

f. Environmental impacts

Botswana's mining operations have traditionally had a limited environmental impact. The diamond mines are opencast, and the main environmental residue has been spoil heaps which, given Botswana's extremely low population density, have not been a major concern. Recovery processes are mechanical or physical rather than chemical and thus pose no major effluent problems. In due course, the need to deal with the large open pits will become an issue, but, given that diamond mining is expected to continue in the current locations for many more years, this will only arise many years in the future. In general, diamond mining operations based on kimberlite pipes have much less environmental impact than those based on alluvial deposits.

However, some specific issues have arisen. The main environmental concern has been related to the BCL copper-nickel smelter at Selebi-Phikwe, which has had consistent problems with the levels of sulphur dioxide emissions that, in certain climatic conditions, cause problems for nearby residents. A second problem has arisen from abandoned mines, especially old gold mines in the Francistown area. As there are no proper records of these mines, many of which date back to the 19th century, the abandoned shafts cause serious problems from time to time.

The Mines and Minerals Act now requires all mining operations to take environmental considerations into account and conduct operations so as to "preserve as far as is possible the natural environment, minimise

and control waste or undue loss of or damage to natural and biological resources, to prevent and where unavoidable, promptly treat pollution and contamination of the environment". All applicants for mining or retention licences must carry out an Environmental Impact Assessment (EIA) that must form part of the Project Feasibility Study Report that accompanies the license application. At the end of operations, the holder of a mineral concession is obliged to restore the top soil of affected areas and restore the land substantially to the condition in which it was prior to the commencement of operations.

Environmental policies have generally been adhered to by the mining companies. The lack of environmental incidents reflects both commitment to environmental policies and the fact that most mining operations have a low environmental impact due to the nature of their processes. However, the main environmental pollution to date, sulphur discharges from the BCL smelter, partly reflect the nature of the smelting process and the fact that the company – which has run at a loss throughout most of its existence – has been unable to finance the relatively expensive pollution control equipment that could resolve this problem. An important test of the discharge of environmental responsibilities by mining companies will come when future mine closures take place.

g. Population displacement

Although the land in these areas was tribally (communally) owned rather than privately owned, those who were relocated were compensated for their loss of use rights to the land. Rather than displacing people, mining operations tend to attract population movements due to the potential job creation and other economic opportunities and social services.

There has been some controversy in recent years over the movement of people from the Central Kgalagadi Game Reserve (CKGR) in central Botswana, and the issue of the Basarwa/San/Bushmen has generated a great deal of international attention, mostly negative. The controversy stems from a Government decision to move several hundred Basarwa/San/Bushmen from the CKGR to resettlement villages outside of the reserve.[12] A group of former CKGR residents took the Government to

[12] The Basarwa are the earliest inhabitants of the territory now comprising Botswana, along with much of the rest of Southern Africa, and traditionally enjoyed a nomadic hunter/gatherer lifestyle. However, over the past several hundred years, the Basarwa have been pushed into ever more remote territories as incoming groups have encroached on their traditional lands.

court, claming that they had been illegally removed from the reserve. After the longest and most expensive court case in Botswana's history, in December 2006, the High Court found in favour of the Basarwa, concluding that the Government had indeed acted illegally. Those who had been removed from the reserve are now in the process of returning to their former homes. However, the court found that there was no connection between the removals and possible mining in the CKGR

h. Corruption

Reported levels of corruption are relatively low in Botswana. The Transparency International Corruptions Perception Index, published annually, ranks Botswana as one of the least corrupt countries in the world. In 2006, the CPI rated Botswana at place 37 out of 163 countries, making it the least corrupt country in Africa, and less corrupt than Italy, Greece, Malaysia and South Africa.[13] The low level of corruption partly reflects pre-emptive action taken by the Government, which in the 1990s had become seriously concerned about the detrimental effects of corruption and economic crime should it take hold in the country. In developing new legislation and anti-corruption structures, the Government reviewed the approaches taken elsewhere in the world, particularly Hong Kong (China), and saw that significant results had been achieved by implementing a "three pronged attack" of detailed investigation, corruption prevention and public education. It was also clear that the greatest success had been enjoyed in those countries which had established separate bodies specifically set up and designed to deal with corruption problems rather than imposing additional burderns on existing law enforcement agencies. As a result a Corruption and Economic Crime Act was enacted, leading to the establishment of the Directorate on Corruption and Economic Crime (DCEC) in 1994.[14]

With regard to the Extractive Industry Transparency Initiative (EITI), Botswana has been a supporter of the general principles but for many years it was not a formal subscriber. Botswana has generally been relatively open regarding receipts from the mining industry. The annual budget documents clearly state total revenues received from minerals. However, this is not broken down by company or by mineral (although

[13] See www.transparency.org.

[15] The impartiality of the DCEC is achieved by having it operate largely independently of government structures, with the Director reporting directly to the President and prosecution decisions being taken by the Attorney General. It has its own powers of investigation, arrest, and search and seizure, and is widely recognized as being an effective anti-corruption agency.

it is well known that the vast majority of revenues are derived from one mineral, diamonds, and one company, Debswana). Both of the major mining companies, Debswana and BCL, are private and do not publish their accounts (although due to its loss-making position, payments to government by BCL are minimal). Botswana's reluctance to subscribe formally to the EITI reflected a number of factors, including the historical secrecy of the diamond industry, the confidentiality of the revenue sharing agreements with De Beers and Debswana, and a desire not to give away confidential commercial information to competitors.[15]

However, in May 2007, the Government announced that it would henceforth subscribe to the EITI.

i. HIV/AIDS

Mining communities are sometimes associated with a high risk of exposure to HIV/AIDS. This is particularly the case when miners are migrant labourers, living temporarily in mining locations while their families are elsewhere. Although this pattern characterized many mining settlements in South Africa, it does not apply in Botswana, where permanent settlements have been established around most mining operations, where miners live with their families. Nevertheless, Botswana's mining towns are associated with migration, mainly because they offer more economic opportunities than surrounding rural areas, and there is some evidence that rates of HIV infection are relatively high in mining areas. Adult HIV prevalence rates in the three health districts which include significant mining settlements are shown in table 2. Two of the mining areas have HIV prevalence rates higher than the national average, and indeed Selebi-Phikwe has the highest rate in the country.

Table 2. HIV Prevalence Rates, 2005

Health District	HIV prevalence rate (%)
Selebi-Phikwe	46.5
Boteti (Orapa, Letlhakane)	35.4
Jwaneng	30.3
Botswana	33.4

Source: HIV/AIDS Sentinel Survey, Ministry of Health, 2005

[16] The Government's formal position was laid out at the launching of the EITI in 2003. See http://www.dfid.gov.uk/pubs/files/eitidraftreportbotswana.pdf

4. Policy towards the mineral sector

a. Government structure

The Government's dealings with TNCs in extractive industries are mainly handled through the Ministry of Minerals, Energy and Water Affairs (MMEWA), which has the portfolio responsibility to coordinate development and operational activities in the energy, water and minerals sector. Specific programmes and projects to fulfil these responsibilities are carried out by Ministry's four departments Geological Survey, Mines, Energy Affairs and Water Affairs. The Ministry headquarters provides leadership and policy directions to the departments and parastatals. This Ministry formulates, directs and coordinates the overall national policies on minerals, energy and water resources, including short and long term strategies for implementing the approved national policies and programmes on minerals, energy and water resources. In addition, the inter-ministerial Minerals Policy Committee (MPC), comprising relevant Permanent Secretaries and the Attorney General, provides overall policy guidance and takes the lead in mining negotiations.

b. The policy framework[16]

Botswana's policy towards extractive TNCs, and indeed investment in the mining sector more generally, has been refined over many years, and has a number of components. Providing a stable macroeconomic framework is important, including low inflation and a stable real effective exchange rate. The general policy framework is market-oriented, and supportive of the private sector. Generally, the Government has been content to let private investors run the mining operations, with a government ownership stake where appropriate. The focus is on revenue sharing/appropriation of mineral rents.

The rapid growth and overall success of Botswana's minerals sector over the past thirty years has been in no small part due to the nature of the minerals policies followed by the Government. Broadly, the minerals policy framework has aimed to engage the private sector as the main driving force in exploiting the country's mineral resources, in a constructive partnership with the Government. This reflected the Government's knowledge, in the early years after independence, that it had neither the financial resources nor technical expertise to embark on major mining projects on its own. A deliberate decision was taken

[16] More details on the evolution of the minerals policy framework are provided in Harvey & Lewis, 1990, chapter 6; Gaolathe, 1997; Jefferis, 1998; and Leith, 2005.

to engage with international mining companies to take the lead in prospecting, development and operation of the mines. The Government's approach was based on a commercial and developmental perspective, rather than the more political and nationalist approach often adopted elsewhere, which led to the nationalization of mining activities with, typically, adverse consequences for those countries and their mining industries. In contrast to many other countries, Botswana has never nationalized mining companies or attempted to run mining operations as state-owned enterprises.

Botswana's minerals policy framework is intended to provide a stable, investor-friendly framework to support private sector investment decisions, enabling them to earn an adequate return on capital and reward for risks taken, while ensuring that excess profits, or mineral rents, are secured for the nation through a suitable fiscal regime. In maximizing the economic and other benefits for the country, minerals policy aims to: accelerate prospecting and new mine development; encourage activities that generate real value added and linkages with the rest of the economy; create training and employment opportunities for citizens; and minimize the environmental damage caused by mining operations.

One of the important early decisions taken in the establishment of the minerals policy regime is related to the ownership of mineral rights. At independence, mineral rights were held by landowners, which included the State, private farmers and tribal authorities. If this situation had been left unchanged, mineral discoveries could have led to considerable inequalities between mineral-producing and other areas of the country, uneven growth, and quite possibly generating ethnic, social and political tensions. It would also have deprived the Government of a potentially important source of revenue. An early decision was therefore taken to seek transfer of mineral rights to the government. This was achieved through a process of negotiation and a mineral rights tax that encouraged either rapid exploration or surrender of mineral rights. Importantly, there was no expropriation of privately held mineral rights.[17]

A second important policy decision involved the formulation of the mineral taxation regime. Recognizing that the value of any mineral deposit was subject to considerable uncertainty, and could fluctuate

[17] The transfer of mineral rights to the State was driven by Botswana's first president, Sir Seretse Khama, who was also Paramount Chief of the Bangwato, the largest tribal group, whose land also included most of the areas where minerals had been found. By pursuing the handover of tribal mineral rights to the state, Khama subordinated narrow tribal interests to the overall national interest, and provided the basis for the subsequent national stability.

over time, the Government adopted a mixture of revenue generating mechanisms. Rather than relying solely on a fixed royalty rate, which might be too high (for a marginal mining operation) or too low (for a highly profitable operation), it chose, in addition to a modest royalty rate, to require an option to acquire a small portion of the equity in the mining operation. Initially this was at no charge, although under recent revisions, the equity is now paid for on a cost-related basis.[18] As a result, government has shares in most major mining operations. Mineral companies are also subjected to profits taxes, although the regime is different to that applied to other private sector companies.

Besides providing the Government with a revenue source related to the profitability of the project, equity stakes have another important function, which is to provide a mechanism for government representation on the company boards. This provided the Government with first hand information on mining operations and a direct say in the management of the nation's mineral resources. The arrangement helped ensure that Government polices were understood by mining companies, and that the Government had a good appreciation at an early stage of any problems faced by mining companies. In general, Government participation through minority equity stakes has facilitated a beneficial collaborative relationship between government and private mining companies.

c. Mining laws

Exploration and mining in Botswana is governed primarily by the Mines and Minerals Act, 1999 (Cap 66:01). The legislation governs the ownership of minerals and mineral rights, applications for prospecting licences, retention licences, mining licences and environmental obligations. The Act also provides for financial aspects such as royalties to be paid, licence fees and penalties. Other relevant legislation include: the Precious and Semi-Precious Stones (Protection) Act, which provides for the protection of the precious stones industry and regulates dealing in precious and semi-precious stones; the Petroleum (Exploration and Production) Act; the Mines, Quarries, Works and Machinery Act, which deals with mine safety; and the Atmospheric Pollution Prevention Act, which deals with environmental issues.

Three types of licence are available for mining activities:

(i) Prospecting Licences, which are granted for a period of three years, and may be renewed twice for further periods of two years. The

[18] Additional equity shares can be acquired by the Government at a price to be negotiated.

granting of a prospecting licence involves a commitment to minimum levels of expenditure over the licence period. All information gathered during prospecting must be submitted to the MMEWA; should prospecting not lead to an application for a retention or mining licence, that information can be made available to other companies, who may apply for a prospecting licence for the same ground;

(ii) Retention Licences, which are granted where minerals have been found during prospecting, but which are not, in the short-term, economically viable to mine. The retention licence is granted for a further period of three years and may be renewed only once for a further period of three years;

(iii) Mining Licences, which are granted for periods of up to 25 years, and may be renewed for a further 25 years. If a mineral deposit is found to be economically viable during the prospecting phase and subsequent feasibility study, the holder of the prospecting licence has a preferential right to apply for a mining licence. Applications for mining licences must be accompanied by an Environmental Impact Assessment.

Once a mining licence is granted, the investor is allowed to operate the mine with little or no interference from government, subject to compliance with applicable laws, environmental and health and safety regulations etc. The granting of a mining licence automatically gives the investor a lease over the land covered by the mining lease.[19] The investor is expected to meet the costs of providing infrastructure (e.g. electricity and water supplies) and access roads. Skilled expatriate personnel can obtain work and residence permits, although the investor is required to have a localisation and training plan that will over time enable citizens to take over skilled positions.

d. Government investment

At the time that a mining licence is issued, the Government has the option of acquiring up to 15% working interest participation in the proposed mine, including the right to appoint up to two directors. If the option is exercised, Government pays for this shareholding by contributing its working interest percentage of all audited expenditure

[20] Access to land is considerably easier for an investor in mining than for investors in other industries, where it has been a perennial problem, especially for foreign investors (see e.g. FIAS, 2003).

incurred by the company to which the licence was issued that is directly attributable to the acquisition of the licence, including relevant prospecting expenditure. If the Government chooses not to exercise the option at the mine development phase, the option lapses. This provision applies to all mining operations except for diamonds, where the ownership level and the terms of ownership are a matter for negotiation.

While the Government has taken an ownership stake in most mining operations in the past, it now appears to be taking a strategic decision to invest only in major operations, and has recently waived its right to take equity stakes in the two most recently licensed mining operations (Diamonex and African Copper). While there has been no public announcement of the reasons for this, it may reflect the Government's desire not to stretch limited management resources stretched too thin, and a desire to concentrate those resources on larger projects of strategic interest. In such projects, the Government's role in decision-making or ability to access information may have broader economic merit.

e. Royalties and taxation

The holder of a mineral concession is liable to pay royalties to the Government on any mineral right obtained by him. The prescribed rates for such royalties are the following percentages of gross market value: precious stones (10%), precious metals (5%) and other minerals or mineral products (3%), where "gross market value" is defined as the sale value receivable at the mine gate in an arms-length transaction without discounts, commissions or deductions. Any royalties paid during the year of assessment are allowed as a deduction in the computation of the company's chargeable income.[20]

There is an allowable deduction known as the mining capital allowance, computed in accordance with 100% of the mining capital expenditure made in the year in which such expenditure was incurred with unlimited carry forward of losses. This deduction is not transferable between distinct and non-contiguous mining operations. From 1999 a new non-negotiable mining tax formula was introduced in order to provide international investors with greater certainty. A variable rate income tax was introduced under which mining profits are taxed according to the following formula:

[21] The gross income of any mining company includes all amounts accruing as a result of mining and prospecting operations and all amounts accruing from the processing, marketing, servicing, financial or administrative operations whether carried out in or outside of Botswana.

annual tax rate = 70 – 1500/X.

where X is the profitability ratio, given by taxable income as a percentage of gross income, provided that the tax rate shall not be less than the company tax rate of 25%. The maximum theoretical tax rate that can arise under the formula is 55%.The actual tax rate applicable each year therefore varies, depending on the profitability of the mining operation. The taxation of diamond mining is subject to a different regime, and is subject to agreement in terms of section 51 of the Act.

In general, the tax rates applicable to mining operations (i.e. apart from diamonds) are non-negotiable, under Schedule 12 of the Income Tax Act. In contrast to other economic activities, fiscal concessions cannot be offered to investors in the mining sector, whether TNC or domestic.[21]

f. Small-scale mining permits

Separate regulations apply to small-scale mining, which refers to mining operations, other than for diamonds, processing less than 50,000 tonnes of raw ore per annum and in which the overall investment in fixed assets does not exceed P1 million.

g. The special case of the diamond industry

The diamond industry is treated as somewhat of an exception, and is more subject to negotiated agreements rather than hard and fast rules. The diamond industry has been by far the most important component of the mining industry, and its treatment has evolved as the Government has become more experienced and acquired greater understanding of the international minerals industry and of TNCs.

As it became apparent through the 1970s that diamond production was turning out to be much larger scale, and much more profitable than originally expected, the Government used the opportunity provided by De Beers' applications for further mining licences to re-open negotiations regarding the terms of the agreement between them. In particular, the Government increased its shareholding in Debswana from 15% to 50%, which enabled theit to secure the bulk of the profits from diamond mining. While the exact agreement between De Beers and the Government is confidential, it is generally believed that the Government receives around 75% of the profits from diamond mining, whether in the

[21] However, fiscal concessions can be negotiated for downstream processing, such as metals refining, diamond cutting etc.

form of mineral royalties, profits tax, dividends on its shareholding, or withholding tax on dividends paid outside of Botswana.[22]

When the agreements with De Beers were renegotiated during the 1970s, the Government was criticised in some quarters for driving too hard a bargain, which would discourage further foreign investment both in the mining sector and elsewhere in the economy.[23] However, despite the less favourable agreement, De Beers nonetheless proceeded with the establishment of the Jwaneng mine in the late 1970s, and with expansions of Jwaneng and Orapa during the 1990s. More recently, the Botswana mining environment has received very favourable ratings by international standards; the Australian industry journal ResourceStocks rated Botswana as the lowest risk jurisdiction in the world for mining investment,[24] reflecting its stable policy environment, predictable and transparent regulatory regime, and low levels of corruption.

Botswana's status as the world's largest producer of diamonds gives it considerable leverage in negotiations, and the Government has used this leverage to good effect. The Minerals Policy Committee, which leads such negotiations, is well resourced, and can call upon technical inputs from both within Botswana and internationally if necessary. The principle adopted has been to ensure that the Government's negotiating team can match those of TNC mining companies in terms of expertise and depth of knowledge.

Botswana has also been fortunate in the nature of its diamond deposits. Kimberlitic diamond deposits ("pipes") occur in well-defined locations where exploitation rights can be granted to a single recipient, production can be monitored for taxation purposes and effective security enforced to minimise opportunities for theft. This contrasts with alluvial diamond deposits, where diamonds are widely scattered in riverbeds and mining tends to be carried out by a large number of small scale artisanal miners, and where production is more difficult to monitor and tax.

In recent years, the Government has again negotiated hard with De Beers when the mining licences for the De Beers mines were up for renewal (after 25 years). In return for renewing the licences for a further 25 year, it secured commitments from De Beers to undertake

[22] Although, by implication, De Beers only receives some 25% of the profits, the company still makes more profit in Botswana than anywhere else in the world. This reflects the very large scale and the very high profitability of diamond mining in Botswana.

[23] See Hartland-Thunberg, 1978, p. 51.

[24] *ResourceStocks*, November 2005, www.resourcestocks.com.au.

downstream value added activities in Botswana. In particular, De Beers agreed to relocate some of its diamond sorting and aggregation activities from London to Botswana, and the DTC will establish an operation in Gaborone. As a result, diamonds from a variety of countries that pass through the De Beers marketing channels via DTC will be brought to Botswana for mixing and sale, and some of the regular De Beers "sights", where diamonds are sold to selected buyers, will take place in the country. De Beers is also supporting the establishment of diamond cutting operations in Botswana by a number of its clients. The Government also used the negotiations around the renewal of mining leases to further increase its share of the profits earned by Debswana to over 80%.

Overall, Botswana's relationship with De Beers in the diamond industry has been highly successful. The incentives of both parties have been aligned to securing the long-term future of the industry; at the same time, Botswana has secured a high proportion of mineral rents for its own benefit while allowing the investor a good return on capital invested. And unlike many lucrative relationships between governments and TNC mining companies, corruption has been avoided and the revenues have been used for the benefit of the society at large.

h. Policy towards use of mineral revenues

The Government is aware that mineral revenues are essentially derived from the sale of an asset, and that prudent public finance principles require that these revenues are reinvested in assets of some kind, rather than consumed. The basis for this is that minerals are a non-renewable resource, and that as mineral reserves are depleted, alternative assets should be built up that can be used to generate alternative sources of income. In principle, therefore, the Government requires that mineral revenues are devoted to investment spending and that recurrent (consumption) spending is financed from non-mineral revenue sources. The interpretation of investment spending is fairly broad, and includes all government spending on physical infrastructure (such as roads, water supplies, schools etc.) as well as spending on education and health care, on the basis that this represents investment in human capital. This objective has generally been achieved. Apart from three years between 2000/01 and 2003/04, non-investment spending has been completely financed from non-mineral revenues.

In most years the Government has run a budget surplus, and has accordingly accumulated significant cash balances at the Bank of Botswana. Moreover, at the end of 2005, total government debt was

approximately P3.9 billion (P2.1 bn external debt, P1.8 bn internal). Against this, Government balances at the Bank of Botswana totalled P12.8 billion, and were equivalent to approximately 50% of annual spending.

The Government's objective of devoting mineral revenues to investment in economic, social or financial assets represents a particular approach to resolving a problem that faces all mineral producing countries, that of responding to the depletion of those mineral resources. It is now widely recognized that some form of asset accumulation is a necessary response to mineral reserve depletion, and this contrasts with the approach that several developing countries have taken in the past, of borrowing against future mineral revenues and accumulating debt (Zambia and Nigeria being amongst the most prominent examples in Africa).

Botswana has not explicitly targeted the building up of a fund of financial resources, but has instead concentrated on investment in economic and social assets, which may be a more appropriate response in the context of a low-income developing country (which Botswana was when its mineral boom started). Nevertheless, Botswana has accumulated financial assets; even with an ambitious spending programme. In addition, the economy as a whole accumulated significant foreign exchange reserves, which by the end of 2006 were equivalent to around 80% of GDP. Both sets of reserves – the Government's accumulated balances at the Bank of Botswana and the nation's accumulated foreign exchange assets – provide important cushions against economic shocks. The availability of domestic and external reserves enables short-term, temporary, shocks to be ridden out, and provide a time period for adjustment should shocks turn out to be permanent. Botswana's policy of accumulating financial assets as a shock absorber has therefore been a prudent one.

i. Policy towards maximizing indirect impacts

The main channel for maximizing the indirect impact of the mining sector has been through the use of revenues from the mining sector to finance a wide range of government spending, which has led to the development of extensive social infrastructure. However, the Government has also worked through the mining companies themselves. With regard to BCL, where the Government is the largest single shareholder, government policy has been too maintain the operations of the mine even though, due to extensive accumulated losses over the

years, it would have been closed on the basis of a strict application of financial or economic criteria. The purpose of keeping BCL open has been to sustain the town of Selebi-Phikwe and its 50,000 population, which would be devastated if the mine were to close. The Government has achieved this through facilitating the exit of the original shareholders while avoiding liquidation of the company, and by the provision of emergency funding to enable the continuation of operations while the company was making losses.

The Government has also used its 50% ownership of Debswana and its resulting Board representation to promote indirect social and economic benefits. Debswana has an extensive Corporate Social Investment Programme.[25] There have also been specific initiatives to increase the proportion of supplies purchased locally by Debswana, including a mentoring programme for actual and potential suppliers to enable them to meet quality and related requirements. Government has also promoted the establishment of capacity within Debswana to carry out a variety of functions within the mining operation that were previously carried out on Debswana's behalf by De Beers.

j. Impact of minerals on general macroeconomic policy

Being a mineral exporter raises particular problems for macroeconomic management. The potential dangers of "Dutch Disease" are well known. Botswana has attempted to protect the tradables sector through a policy of "exchange rate protection", whereby the maintenance of a fixed exchange rate prevents the nominal exchange rate from appreciating, thus inhibiting real appreciation. The outcomes of such exchange rate protection include the accumulation of foreign exchange reserves; keeping consumption below the levels that would otherwise result from the higher (boom-induced) real income; and a forced balance of trade surplus. Exchange rate protection needs to be accompanied by sterilization of the monetary impact of reserve accumulation, through open market operations or budget surpluses (Corden, 1984).. Whether the policy has been successful is difficult to ascertain. The real effective exchange rate, one measure of international competitiveness, has been reasonably stable over a long period of time, which would indicate that the Dutch Disease may have been avoided. Nevertheless, the process of structural change in the economy is highly consistent with Dutch Disease predictions, with the relatively slow growth of the tradeables

[25] See De Beers Report to Stakeholders, 2005/06

sectors (agriculture and manufacturing) relative to the non-tradables (services) sectors.[26] The lack of economic diversification, and the continued domination of the economy on the mining and government sectors, also provide evidence that Dutch Disease problems have not been avoided.

5. Conclusions and recommendations

Botswana's policy towards dealing with investors in extractive industries is generally considered to be amongst the best in the world. Investment has been facilitated through an open and transparent mineral licensing and taxation regime, operated by a competent and honest institutional structure. Private investment has been encouraged, and although Government has an ownership stake of 15% to 50% in major mining projects, it does not take a direct role in the operations of mining ventures. The taxation regime does not particularly aim at encouraging investors through low taxes, but does aim at an appropriate rate of tax – low for marginal mines and high for established and profitable operations – that yields a fair rate of return for investors but enables government to secure rents in excess of that rate of return for the national benefit. Minerals and foreign investment have yielded considerable macroeconomic benefits for Botswana, with rapid growth, rising living standards, extensive investment in social and economic infrastructure, and healthy fiscal and balance of payments positions.

There are three main weaknesses in the way in which the mineral sector has developed in Botswana: the relatively small direct employment impact, the lack of downstream processing and value added activities, and the lack of locally owned firms in the industry. Despite rapid growth, unemployment in Botswana remains high (18% in 2005/06).[27] This has many causes, and cannot be particularly blamed on the resources sector as it largely reflects the nature of the industry and its production processes, but it can be said that the mining industry has done little to resolve Botswana's employment problem.

The lack of downstream processing has long been of concern, with Botswana's minerals mainly exported in unprocessed (rough

[26] The combined share of agriculture and manufacturing in GDP fell from 40% in 1974/75 to 7% in 2002/03, while that of services grew from 22% to 31% of GDP over the same period. Perhaps more strikingly, while the output of the services sector was equivalent to 56% of the combined output of agriculture and manufacturing in 1974/75, by 2002/03 services output was 440% of that of agriculture and manufacturing.

[27] See the report of the *2005/06 Labour Force Survey* (CSO, 2006)

diamonds) or semi-processed (copper-nickel matte) form. Processing offers some potential for employment creation, although there have been a variety of economic factors that have inhibited the establishment of commercially viable downstream activities. Of late, however, there has been more effort devoted to attracting investors in the further processing of minerals, most notably with government using its leverage in mining lease negotiations with De Beers, and allowing minerals processing to benefit from the concessionary 15% corporate tax rate applicable to manufacturing companies. Several minerals processing ventures are in the process of being established or are likely to come to fruition in the near future (including a nickel refinery, diamond cutting and polishing, and an export power station). Nevertheless, policy should focus on creating the conditions that would support the further development of value addition based on Botswana's mineral resources. Similarly, policy should also encourage the development of competitive local supply chains for the mines, rather than reliance upon imports.

The lack of locally owned firms in the mining sector, and the almost complete dependence upon foreign investment also needs to be addressed, and policy should perhaps focus on encouraging joint ventures between local and foreign investors. The Government's right to a shareholding in mining projects could be used as the basis for such participation, which would in due course support the emergence of local entrepreneurs in the mining industry.

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Annex 1. Prospective mining developments in Botswana

- Diamonex diamond mine near Martin's Drift (Tuli Block – eastern Botswana): a mining lease has been issued and production from a small mine is expected to start later in 2007. Diamonex is an Australian-listed junior mining company, whose principal project is based on the Martin's Drift kimberlites.
- African Diamonds is a diamond exploration company focused on a number of kimberlites in the Orapa area, near to the existing Debswana Orapa mine. Encouraging results have been obtained from the AK6 kimberlite pipe which is likely to lead to the establishment of a medium-sized diamond mine in 2008 or 2009. African Diamonds is listed on the London (AIM) and Botswana stock exchanges, and is mainly focused on developing the Orapa kimberlites.
- Gem Diamonds is a diamond mining and exploration company with an existing diamond mine in Lesotho. It has acquired the proven Gope deposit in the Central Kalahari Game Reserve from De Beers, and is intending to establish a medium-sized diamond mine within the next few years. Gem Diamonds is listed on the London (AIM) stock exchange.
- African Copper has received a mining lease for the Dukwe copper deposit north of Francistown, and a mine is being established during 2007 with production expected to start in 2008. The company also holds prospecting rights over adjacent copper deposits at Matsitama. African Copper is listed on the London (AIM) and Botswana stock exchanges. The Dukwe deposits were mined between the 12th and 15th centuries, and again in the early 20th century. While they were extensively prospected by major TNCs (including Anglo American and Falconbridge) during the 20th century, these companies did not consider mining worthwhile.
- Meepong Resources (MR) and Meepong Energy (ME) intend to develop the Mmamabula coal deposits and establish a 2400 – 4 800MW coal-fired power station to produce electricity for export to South Africa. MR and ME are owned by CIC Energy Corp., a mining development company listed on the Toronto and Botswana stock exchanges, and International Power plc, a major independent power producer listed on the London and New York stock exchanges. Subject to final feasibilities, the project is likely to start operations in 2011.
- Discovery Metals: the company is listed on the Australian and Botswana stock exchanges and is prospecting for nickel, copper and other metals in Botswana and Australia. Prospecting results from the company's Maun copper-silver deposits appear to support the development of a viable mining operation. While the company is a junior, Falconbridge (a Canadian major) holds a significant shareholding.

Other international companies currently prospecting for minerals in Botswana include:

- A-Cap Resources Ltd: - listed on the Australian and Botswana stock exchanges; prospecting for uranium;
- Albidon Ltd – listed on the Toronto and Australian stock exchanges; prospecting for gold, copper, nickel and other metals;
- Aviva Corporation Ltd – listed on the Australian and Botswana stock exchanges; prospecting for coal;
- Central African Gold plc – listed on the London Stock Exchange (AIM); prospecting for gold;
- Firestone Diamonds plc – listed on the London Stock Exchange (AIM); prospecting for diamonds;
- Motapa Diamonds Inc. – listed on the Toronto Stock Exchange ; prospecting for diamonds;
- Mount Burgess Mining NL – listed on the Australian Stock Exchange; prospecting for lead and zinc;
- Petra Diamonds Ltd – listed on the London Stock Exchange (AIM); prospecting for diamonds;
- Tawana Resources NL – listed on the Australian stock exchange; prospecting for diamonds;
- Trivalence Mining Corp. – listed on the Toronto Stock Exchange; prospecting for diamonds;
- Tsodilo Resources Ltd– listed on the Toronto Stock Exchange; prospecting for diamonds.

The role of TNCs in the extractive industry of the United Republic of Tanzania

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Tanzania is richly endowed with mineral resources. Since the mid-1990s, the mining sector has been the fastest-growing sector in the economy, following adoption of favourable investment policies with specific measures for the mineral sector. The influx of FDI is having a net positive development impact, but which needs to be nuanced. First, the impact on the industry in terms of export revenue, employment, technology, skills and knowledge, and Government revenue is significant in absolute and relative terms, given the low base from which the industry grew. Secondly, the impact on local communities is also notable, however, the size of such contributions is largely disproportionate to the revenues accruing to the TNCs and the social cost of the environmental degradation associated with the mining operations. Finally, There is a lack of substantial economy–wide multiplier effects, as would be suggested by the "trickle-down" theorem; but this is purely a policy failure argument in that the lack of significant linkages to the rest of the economy arises from weak supply capacity and an incomplete supply chain. Policy recommendations are made based on a careful assessment of the wider social, political and economic dimensions.

1. Introduction

As specifically stated in its National Vision 2025, the United Republic of Tanzania is keen to sustain policies for attracting increased flows of private domestic and (especially) foreign investment, given the associated development opportunities (see annex). Since the mid-1980s, the Government has taken action to address investment impediments, including reforming the trade regime, exchange rate and other monetary and fiscal policies, coupled with efforts to improve governance and physical infrastructure. The current poverty reduction strategy (MKUKUTA) aimed at accelerating growth and reducing poverty envisions a vital role for foreign investors, including transnational corporations (TNCs) in particular, playing a key part in the

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development of Tanzania's large untapped mineral resources by bringing in much-needed capital, becoming a vital conduit for the transfer of technology and skills to Tanzanians and generating revenue that can be shared equitably between the tripartite stakeholders, namely investors, government and local communities. In this regard, the success of efforts by the Government (among other development partners) to improve the Tanzania Investment Centre as a one-stop investment promotion and facilitation centre has paid significant dividends.[1] Mining and tourism are among the key growth industries that have benefited notably from foreign direct investment (FDI) inflows, in response to the attractive incentives put in place by the Government. Consequently, these industries have been empowered to play a more significant role in the country's growth strategy, notwithstanding the debate on unequal distribution of mining revenues.

This case study notes several particular features of the United Republic of Tanzania, from which the following key findings and messages are drawn.

- Coupled with relatively low rate of exploitation, the country's endowments of a variety of mineral resources make it particularly attractive to mining TNCs. Nevertheless, mining accounts for a disproportionate share of total FDI inflows to the country.
- The achievements made in recent years in attracting FDI have been significant for mining, as shown by increased flows of FDI. The key factor explaining increased inflows of FDI into the extractive industry was the adoption of a more open and liberalized economic policy regime.
- Although the response of domestic investment in mining has been marginal, the policy and legal framework is considered to be highly attractive for FDI.

The impact of TNCs has been more pronounced in terms of volume of investment, technology transfer and export revenue, but less positive in terms of contributions to growth and reduced poverty. The complaints that the mining TNCs benefit disproportionately from mining revenue have led to the public's disillusionment as to mining policy.

Based on these findings, this article identifies a need for policies to enhance economy-wide benefit and sustainability of the extractive industry in the United Republic of Tanzania. Furthermore, although the

[1] The Tanzania Investment Centre has been rated as one of the best Investment Promotion Agencies in sub-Saharan Africa.

prospects for further FDI by TNCs are not necessarily dim, it would depend on continued macroeconomic stability, policy coherence and mutual efforts to address ensuing environmental effects, among other factors.

This article is organized as follows. The next section discusses trends and determinants of TNC activities in the extractive industry. Section 3 addresses the impact of TNCs in the mining industry by examining their contribution to overall socio-economic development and their role in the industry and benefit to the communities around the mining areas. Section 4 presents the policy and institutional framework guiding involvement of TNCs in the mining sector and how it has evolved and been implemented over time. The final section provides some conclusions and recommendations.

2. Trends and determinants

The United Republic of Tanzania is richly endowed with a variety of minerals. In recent years, the mineral industry has produced gold, copper, silver, and rolled steel products, along with such industrial minerals as diamond, calcite, and other gemstones, Tanzanite, gypsum, phosphate rock and salt. The country has also produced coal, natural gas and building materials such as cement, gravel, limestone, pozzolanic materials and sand. It has also known deposits of cobalt, iron ore, nickel and titanium. The country's highly attractive mining investment policy, coupled with a relatively stable political environment with sound legal and fiscal policies, has provided a powerful incentive for TNCs to invest.

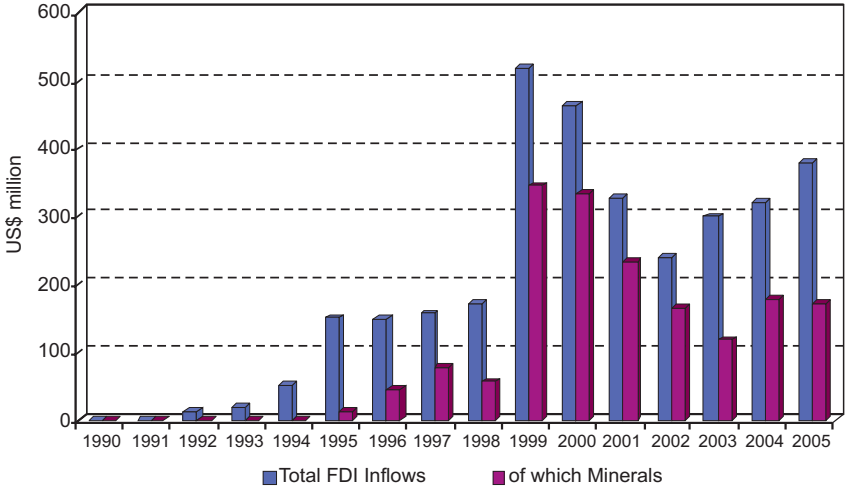
Although the earliest organized prospecting and mining took place during the German colonial period, with gold discoveries in 1894, production was insignificant until the recent involvement of FDI. Part of the reason was the nationalization of the mineral sector in 1968 and the failure of the State Mining Company to develop the sector due to inadequate human and capital resources. Economy-wide market and financial sector reforms since the mid 1980s provided new impetus for foreign and local investments, especially in mining (figure 1).

a. FDI trends and key players

FDI inflows grew considerably in the second half of the 1990s. This period was marked by improvements in the economic situation, rigorous reform efforts to improve the investment environment, and the beginning of the privatization programme. UNCTAD (2002) notes that

the market-oriented reforms reached critical mass and sound foundations for an enabling framework for FDI were put in place, triggering a positive response from private investors abroad. For example, the number of prospecting licences increased from only 10 in 1992 to over 3,000 in 2005. Similarly, mining licences increased from only nine to over 190 during the same period. In tandem, overall FDI into Tanzania between 1992 and 2005 totalled $2.9 billion (of which $1.4 billion was mineral related), compared to less than $2 million between 1986 and 1991. The years 1999 and 2000 experienced the highest levels of FDI inflows, primarily in connection with the proliferation of mineral prospecting activities in the country.

Figure 1. FDI inflows into Tanzania, 1990-2005
(Millions of dollars)



Source: Tanzania Investment Centre.

According to the information from the Tanzania Investment Centre, investments by TNCs have largely focused on gold (table 1). Gold production increased to 54,083kg in 2005 from 48,018 in 2003. Since 2003, Tanzania has been the third-largest gold producer in Africa. Foreign affiliates in Tanzania have a combined estimated production capacity of some 56,800 kg gold annually. Tanzania's resources amount to almost 1,500 tons of contained gold, of which nearly 780 tons are reserves.

Investments continue to flow into mining in the form of prospecting and exploration. For example:

- AngloGold Ashanti spent $5 million on exploration in Tanzania in 2004;
- Barrick and its joint venture partner Explorations Minières du Nord Ltèe (MDN) (Canada) invested $48 million in the construction of the Tulawaka open pit gold mine;
- Barrick commissioned a $5 million exploration study for gold at Buzwagi in 2005;
- Resolute Gold used $5 million on feasibility studies on their Matinje West properties;
- In 2004, Tan Range Exploration (United States) increased its holdings in the Lake Victoria goldfields to 121 prospecting licenses, from 78 in 2003;
- Coeur d'Alene Mines (United States) was awarded ten prospecting licenses for gold and silver in the Lake Victoria goldfields. The company planned to spend $300,000 on exploration in 2005;
- Currie Rose Resources of Canada signed a joint venture agreement with Sub-Sahara in 2004, which covered exploration of the Jubelee Reef, the Mabale Hills and the Nyamirembe project areas (Mining Review Africa, 2004).
- Lakota Resources (Canada) commenced drilling on the Ikungu property in 2004;[2]
- Sola Resources (Canada) and Frontier Resources of Tanzania were engaged in a joint venture to explore for diamonds in their Eagle properties near the Williamson diamond mine. The company was engaged in mineral studies and geophysical surveys in 2005.
- Tan Range and Midlands Minerals (Canada) also obtained licences to undertake exploration in Itilima and other properties.

Tanzania has one State-owned corporation in the oil/gas industry, Tanzania Petroleum Development Corporation (TPDC). It was started in 1973 to encourage, promote and monitor exploration and production of oil/gas in Tanzania on behalf of the Government. It facilitates both domestic and foreign investment in the oil/gas industry as well as signing exploration and production contracts on behalf of the Government.

In the natural gas and oil category, the following key terms and conditions are applicable to all investors:

[2] The following year, 2005, another FDI investor, African Eagle Resources of the United Kingdom, carried out exploration at Miyabi that tripled resources to 8.3 Mt at a grade of 1.5 g/t gold.

- Award of 11-year exploration and development concessions based on four initial exploration years with a four-year extension, and a second three-year extension to the point of production;
- Relatively large exploration area concessions up to a maximum of 60 blocks, with RSA certificates for more than one licence;
- Generous and negotiable work programmes covering oil recovery cost allowances and oil profit splits with the Government, with no import duties on all equipment brought in for petroleum and gas exploration;
- No signature or production bonus payments;
- Full allowance for uncovered exploration costs incurred under earlier PSAs by the company in all its contract areas once it has made a discovery in a subsequent PSA, i.e. no ring-fencing.

Table 1. Main foreign affiliates in the mining industry of Tanzania, 2006

Company	Mineral	Location	Entry year	TNC form	Investment (MUS$)	Status
Williamson Diamonds (South Africa)	Diamond	Mwadui	1940	Licenses	12.3	Active, open-pit
Resolute Gold – SAMAX JV (Australia)	Gold	Golden Pride Nzega	1998	Licenses	77	Production
Barrick Gold (Canada)	Gold	Bulyanhulu	2000	Licenses (100% Barrick Gold.)	280	Active, underground
Africa Mashariki Gold Mines/ Placer Dome (Canada)	Gold	Nyamongo, North Mara	2001	Placer Dome acquired North Mara in 2003	72	Active, open-pit
Anglogold Ashanti (South Africa-Ghana JV)	Gold	Geita	2001	Mergers and acquisitions, JV	450	Active, open pit
AFGEM (South Africa)	Tanzanite	Mererani-Arusha	2002	Licenses/ Legislation	20	Active, underground
Barrick Gold (Canada)	Gold	Tulawaka	2005	JV (Barrick (70%) and Explorations Minières du Nord Ltee of Canada (30%))	65	Active, open pit
Barrick Gold (Canada)	Gold	Buzwagi, Kahama District	2006	Licenses	400	Active, open pit

Source: Ministry of Energy and Minerals, 2005, Economist Intelligence Unit, 2004.

Orca Exploration Group, a TNC that has been listed in Toronto since 2004, has a subsidiary, PanAfrican Energy Tanzania, which

operates the remote Songo Songo gas field in Tanzania. The gas reserves were first discovered by ENI (Italy) in 1974, but production begun only in 2004. Five wells are currently in production, with average well rates up to 25 mmcfg/d. Gas demand has substantially exceeded expectations, and negotiations are being advanced to expand the gas plant and boost production by late 2007 to a maximum pipeline capacity of about 105 mmcfg/d. Another investor, Artumas Group (Canada), signed a production-sharing agreement with the Government of Tanzania in 2004 to develop the Mtwara Energy Project (60:40 share split). This project involved the development of natural gas resources in Mnazi Bay in Southern Tanzania, the construction of a 27-km pipeline, the installation of a 30-MW power plant and the upgrading local transmission and distribution systems. The total capital cost was estimated at $97 million. The estimated resources at Mnazi Bay range between 2.1 billion to 6.1 billion cubic metres (Artumas Group, 2005).[3] In the oil category, the joint venture of Aminex (Ireland), Bounty Oil and Gas NL (Australia) and Petrom SA (Romania) drilled the Nyuni-1 exploration well on its Nyuni offshore field concessions. In 2004, Petrobras (Brazil) was awarded an exploration license for Blocks 5 and 6 in the Mafia Basin. In 2003, Royal Dutch/Shell Group (UK/Netherlands) had acquired four offshore blocks (blocks 9, 10, 11 and 12) to the west of Pemba and Zanzibar. Currently, however, Tanzania depends entirely on imports for its petroleum requirements.

b. Role of domestic private companies

Structural and monetary reforms implemented after the mid-1980s redefined the role of the Government as regulator, promoter, facilitator and service provider. Domestic private companies in the mining industry are small and largely artisanal. The ending of the State monopoly in the 1980s opened up opportunities for any citizen to register claims and sell minerals. As a result, the number of artisanal and small-scale miners increased from about 150,000 in 1987 to 500,000 in 2001 and to over 600,000 in 2005 (Phillips et al., 2001; Tan Discovery Minerals Ltd, 2003; Mwaipopo et al., 2004). Growth was further boosted in the early 1990s when the Government allowed exporters to use their proceeds to finance imported goods, equipment and spare parts.

The small operators are mainly engaged in mining gold, gemstones, industrial minerals, gypsum, dimension stones, coal, lime, salt and sand

[3] Artumas, in partnership with TransCanada Pipelines and Overseas Ship Holding Group, has completed the first half of a comprehensive FEED study to provide 50 MMscf/d of compressed natural gas shipped up the coast of Tanzania and to Kenya.

and aggregates. Most small miners use open cast mining methods, which are shallow pits and excavations. Underground mining is practised by a few small-scale miners, largely in reef gold ores, gemstones (tanzanite and rhodolite) and coal. Domestic private companies, small-scale miners and artisanal miners account for about 10% of total mineral production in Tanzania, equivalent to a value of some $55 million per year.

3. Development impacts

The benefits of mining TNCs to Tanzania are not limited to capital and investments but also include increased export revenues, employment, training and skills enhancement, technology, linkages to the local economy, and contributions to the local community. These are discussed below.

a. Production and exports

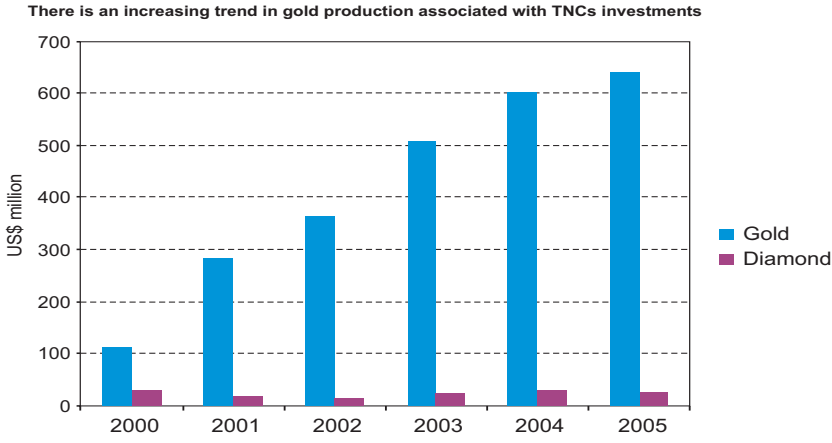
The contribution of mining TNCs to mineral production and export revenue is shown in table 2. Gold production has increased from $114 million in 2000 to nearly $640 million in 2005. Mineral exports by TNCs accounted for over 43% of total exports, up from under 6% in 1999 (table 3).

Table 2. TNCs mineral production and value of exports, 2002-2005

		2000	2001	2002	2003	2004	2005	Total
Gold	Weight Oz (Thousands)	388.3	1,012.5	1,147.1	1,410.8	1,494.5	1,517.4	6,970.6
	Value USD (Million)	114.4	282.8	362.8	509.8	602.3	639.2	2,511.3
Silver	Weight Oz (Thousands)	45.5	268.5	340.9	377.3	427.5	401.2	1,860.9
	Value USD (Million)	0.2	1.2	1.5	1.8	2.9	1.6	9.2
Copper	Weight Oz (Thousands)	-	6,984.7	9,309.8	8,191.0	13,613.9	8,072.1	46,171.5
	Value USD (Million)	-	5.0	6.5	6.0	12.2	11.6	41.3
Diamonds	Weight MC (Thousands)	285.5	189.4	152.2	207.3	286.0	190.4	1,310.8
	Value USD (Million)	28.7	17.7	13.0	22.0	28.9	23.9	134.2
Tanzanite	Weight gm (thousands)	99.3	237.8	229.6	286.9	196.8	282.0	1,332.4
	Value USD (Million)	0.2	1.5	3.3	3.3	5.9	16.5	30.5
Total value (US$, Million)		143.5	308.2	387.1	542.9	652.2	692.8	2,726.5

Source: Ministry of Energy and Minerals.

Figure 2. Most of the TNCs' mining activities are in gold



Source: Ministry of Energy and Minerals.

Table 3. TNCs' mineral exports in relation to Tanzania's total exports, 1999-2005

	1999	2000	2001	2002	2003	2004	2005
TNC Mining Company Exports Value (Million of dollars)	30.7	143.4	308.1	389.1	542.9	652.3	692.8
Tanzania's Total Exports (Millions of dollars, fob)	543.3	663.2	681	874	1175	1439	1608
TNC Mining Exports as percentage of total exports	5.7	21.6	45.2	44.5	46.2	45.3	43.1

Source: Ministry of Energy and Minerals, National Bureau of Statistics, Tanzania in Figures, 2005.

b. Government revenues

FDI in mining activities involves the transfer of the right to mine an area in exchange for some amount of economic rent paid to the government. Economic rents from natural resources are commonly known as "resource rents" since they are derived from natural resources. In the case of mining, resource rents encompass all direct revenues to the Government – taxes and fees from mining activities. These taxes and fees are paid to the Government for the use and development of the nation's resources. Other types of resource rents that are associated with mining projects are landowner compensation and national/local equity participation in resource development.[4] The latter is not a requirement

[4] In this case, the Government, occasionally at the local level, becomes an actual partner in a project, thereby acquiring a percentage of profits in addition to taxes and fees. Since the equity partner is normally the Government or its agent, the majority of revenues from profit sharing accrue to the national Government.

by law, but an option voluntarily exercised by the investor. Table 4 shows the revenues from TNCs between 1999 and 2005. All fiscal provisions are pre-determined by Government, and investors agree with the applicable rates as shown in Section 4.

Table 4. Amount (MUS$) and Structure (%) of tax revenue from mining TNCs by type of revenue

Payment	1998	1999	2000	2001	2002	2003	2004	2005
PAYE - Exp. Salaries	332	343	3427	1673	6770	5980	10321	13515
%)	(15)	(7)	(17)	(7)	(19)	(14)	(18)	(20)
Payroll Levy-Exp.	39	39	455	258	411	596	2165	2644
(%)	(2)	(1)	(2)	(1)	(1)	(1)	(4)	(4)
PAYE-Exp. Gratuity	-	-	-	277	552	2864	40	144
(%)				(1)	(2)	(7)	(0)	(0)
Withholding Tax- Mine site	104	354	5786	5462	5545	5282	5651	4890
(%)	(5)	(7)	(29)	(21)	(15)	(12)	(10)	(7)
Withholding Tax- Dar	-	-	102	78	44			
(%)			(1)	(0)	(0)	-	-	-
Payroll Levy	25	124	242	686	1009	732	967	1259
(%)	(1)	(3)	(1)	(3)	(3)	(2)	(2)	(2)
Skills Dev. Levy	121	226	377	350	326	325	467	557
(%)	(6)	(5)	(2)	(1)	(1)	(1)	(1)	(1)
NSSF	274	520	1103	1027	2076	3465	4296	5300
(%)	(13)	(11)	(6)	(4)	(6)	(8)	(8)	(8)
PPF	-	-	(4)	-	-	(16)	(17)	(92)
(%)			0			0	0	0
PAYE	490	1051	1421	6294	3727	3602	3948	5328
(%)	(22)	(22)	(7)	(25)	(10)	(8)	(7)	(8)
Stamp Duty	2	2	114	153	201	21	41	162
(%)	(0)	(0)	(1)	(1)	(1)	(0)	(0)	(0)
Donations	51	60	178	139	229	316	297	153
(%)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(0)
Road Toll	-	200	441	461	684	800	813	1817
(%)		(4)	(2)	(2)	(2)	(2)	(1)	(3)
Mining Lease	71	150	307	314	352	190	457	485
(%)	(3)	(3)	(2)	(1)	(1)	(0)	(1)	(1)
Royalty	475	1247	4612	6991	10833	16522	21452	23609
(%)	(22)	(26)	(23)	(27)	(30)	(38)	(38)	(36)
Import Duty	200	201	533	1053	2566	971	3734	4834
(%)	(9)	(4)	(3)	(4)	(7)	(2)	(7)	(7)
Others	-	367	610	338	911	1517	1484	1662
(%)		(8)	(3)	(1)	(3)	(4)	(3)	(3)
Total	2182	4883	19711	25555	36235	43198	56150	66451
(%)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
s % of total Govt revenue	2.01	4.31	1.82	2.26	3.23	3.56	4.13	4.04

Source : Ministry of Energy and Minerals.

Notes: Figures in brackets are percentage of total (column wise), where (0) means a contribution less than 1%. PAYE is the Pay As You Earn tax. NSSF is the National Social Security Fund, which is a more general social security scheme, as opposed to a more specific one such as PPF, that is, the Parastatal Pensions' Fund.

As indicated in table 4, Government revenues from major mining operations in Tanzania have been increasing consistently since 1998, from about $2 million to over $66 million in 2005. Since most TNCs mining projects are in the early stages of operation,[5] they have not started paying corporate taxes. Actual revenue to the Government from these TNCs' operations averages some 1.2% of total domestic revenue per year, which has prompted many observers to conclude that Tanzania's mineral resources are not being recovered to develop the country but to benefit foreign investors. Based on the current policy initiatives to emphasize value addition and increased benefits from mineral resources to Tanzania's economy, this dismaying situation is most likely to change for better, subsequently improving the sustainability of the mineral industry and the coherence of mining policy.

c. Employment

TNCs' mining investments have also fostered employment creation, albeit on a small scale (table 5). The limited local employment is partly due to the capital-intensive nature of production in large-scale mines (Kulindwa et al., 2003). Another reason observed by Mwalyosi (2004) is that recruitment of labour by TNCs takes place outside the locality, largely in the commercial capital, Dar es Salaam; and sometimes outsourcing from countries with a history of skilled mining labour such as South Africa, Australia, Canada, Ghana and Namibia. Mining employment fluctuates with production levels and may not be a sustainable source of long-term employment.

Table 5. Size and structure of employment in TNC mining enterprises

Category	1998	1999	2000	2001	2002	2003	2004	2005
Foreign employees	20 (3.3%)	47 (3.9%)	238 (10.2%)	267 (8.0%)	340 (8.3%)	363 (10.2%)	387 (7.9%)	441 (8.3%)
Tanzanian employees								
(i) Local Professionals	32 (5.3%)	99 (8.2%)	244 (10.5%)	318 (9.6%)	375 (9.2%)	151 (4.2%)	135 (2.8%)	325 (6.1%)
(ii) Other cadres	553 (91.4%)	726 (60.2%)	1,066 (45.9%)	1,402 (42.2%)	1,488 (36.5%)	800 (22.4%)	800 (16.3%)	1,588 (29.8%)
On site contractors	-	335 (27.8%)	774 (33.3%)	1,335 (40.2%)	1,877 (46.0%)	2,261 (63.2%)	3,582 (73.0%)	2,966 (55.9%)
Total employees	605 (100%)	1,207 (100%)	2,322 (100%)	3,322 (100%)	4,080 (100%)	3,575 (100%)	4,904 (100%)	5,320 (100%)

Source: Ministry of Energy and Minerals. Size is given by number of employees, while the structure is shown by the respective percentage share of total (in brackets).

[5] Most companies have not yet recovered their capital expenditure, and therefore have not started paying corporate profit tax to the Government (it normally takes five years from the start of production in order for them to recover their capital allowances as part of tax incentives).

The data in table 5 indicate increasing employment levels of both foreign and local employees since 1998. A study by World Bank (2005) found a positive relationship between increased production of gold, largely by TNCs, and growth of employment.[6] As table 5 indicates, employment fluctuates considerably as it occurred in 2003 and 2004 for Tanzanian professionals and other cadres, partly as the sector is growing increasingly capital-intensive.

Apart from the direct employment benefits, mining TNCs create employment more indirectly in the local community through infrastructure investments, in particular in the water, health and roads sectors. For example, Placer Dome, which owns Afrika Mashariki Gold Mines, has invested in improving rural infrastructure around the mining communities, including health ($400,000), education ($550,000), water ($100,000), and roads ($600,000).

d. Transfer of technology and skills

Another measure of impact is the effect of investments on fostering skills development. Skill inadequacies and shortages have long posed a development challenge (ESRF, 2002; UNCTAD, 2001; World Bank, 2001; Wangwe, 1999). Although literacy rates have recorded an improvement from an estimated 67% in 1999 to 84% in 2005, much remains to be done (United Republic of Tanzania, 2005). Some other studies on the Tanzanian experience are less optimistic (United Republic of Tanzania, 2003), and point to the need for the Government and other stakeholders to step up efforts aimed at generating competencies required by the current labour market and globalization. Kweka (2007) notes that employment-based training by various enterprises in Tanzania is mainly geared to filling the shortage of skills in the industry despite the existence of well-educated manpower.

With skill shortages limiting productivity growth, FDI may be looked upon, at least in the short and medium term, as a prime source of human capital development and new technology diffusion for the country.[7] From several surveys on the impact of FDI in Tanzania (e.g. Wangwe et al., 2005), it can be concluded that TNCs not only help in

[6] The correlation coefficient between output from TNCs gold mines and employment was 0.79.

[7] Jenkins and Thomas (2002) for instance, posit that if technical, entrepreneurial and managerial skills are scarce in a country, training of local personnel by foreign subsidiaries established in the country could bring about considerable diffusion of these skills.

multiplying jobs and raising wages but are also useful in encouraging investment in human capital through the transfer of skills (training) and knowledge to the local workforce. All large mining companies undertake training of their staff. The skills imparted pertain to geology, mining, electrical and mechanical engineering related to mining operations, underground mining techniques and safety measures, processing, finance and management.[8]

According to a study by Mllula (2006), the capacity-building component is part of TNCs' strategies to improve efficiency. The Government of the United Republic of Tanzania does not mandate TNCs to undertake local staff training or transfer of technology; has no policy on corporate social responsibility; and imposes no performance requirements regarding training of local staff or technology transfer. However, all investors are encouraged by Tanzania Investment Centre to voluntarily undertake their corporate social responsibilities, including philanthropic activities.

There have been a number of cases of technology transfer. For example, between 2000 and 2003, AFGEM (South Africa) invested some $20 million in tanzanite fields in Mererani. The company pioneered a branding and certification process for its gem-quality tanzanite production. Other mining companies have constantly been expected to emulate this example, given the current policy emphasis on adding value to minerals produced through processing in-country, and branding their products. Another case relates to the leasing of mining equipment. Dalnick Metal leases mining equipment to small and medium-sized miners. This technology, apart from increasing productivity, has facilitated the manufacture of spare parts within the country, thus enhancing technological skills. Mobela Gems, a local firm, provides another example. The joint venture between local and foreign investors (50:50 share split), started operations in 1999 – cutting, polishing, shaping and selling gemstones. The foreign partners have managed to train local employees in gemstone processing, and the company now exports quality gemstones to the Democratic People's Republic of Korea, India, Thailand and the United States.

[8] For example, Barrick Gold Corporation has already spent over US$ 6.3 million to conduct on-the-job training for its 900 local staff. TANCAN Mining Company spent Tshs. 5 million ($4,500) between 2002 and 2004 to train 43 workers. In 2001 to 2003 Gem & Rock Ventures Company incurred Tshs 1.4 million ($1,270) in upgrading skills of its professional workers.

e. *Improvements of local community social-economic infrastructure*

TNCs also have a considerable beneficial impact on local communities where they operate. Driven by their corporate social responsibility (CSR) principles, mining TNCs are helping their respective local communities improve roads, health, education facilities and water supply systems. Expenditures on social-economic infrastructure are important in supporting the community's efforts to fight poverty at local levels (table 6).

Table 6. Mining TNCs' expenditures on community development ($)

	1999	2000	2001	2002	2003	2004	2005	Total
Education	61,431	196,929	338,886	435,179	177,183	824,276	1,131,977	**3,165,862**
Health	27,264	242,905	1,032,583	271,000	170,516	662,372	741,815	**3,148,454**
Water	2,054,866	3,307,440	1,306,420	120,494	83,999	378,965	1,298,276	**8,934,272**
Roads	2,015,193	3,255,230	807,157	381,778	51,213	311,407	2,417,900	**11,477,216**
Micro finance		46,133	-	39,668	13,139	5,120	46,917	**150,977**
Others[a]		1,023,720	161,999	272,267	585,363	2,403,047	4,472,789	**8,919,185**
Total	4,158,754	8,072,357	3,647,045	1,520,386	1,081,413	4,585,187	10,109,674	35,795,966

Source: Ministry of Minerals and Energy.
[a] Includes expenditures on such items as electricity, youth and HIV/AIDS programmes.

While the magnitudes, with a cumulative total of $35.8 million (table 6), appears small in relation to the investments of these TNCs, the impact could be high, partly because of the widespread poverty existing in most rural areas. According to a study by Phillips et al. (2001), perhaps the most important impact is the indirect benefits arising from the expansion of mining activities in these localities. The study shows that the liberalization of mining (and the subsequent expansion in mining activities) in Tanzania reduced poverty in rural areas in the 1990s on a scale far surpassing the impact of donor-funded job-creation efforts. Secondary business opportunities have been important in job creation in the vicinity of both large and artisanal mines. Miners and supporting communities need temporary lodging, restaurants, equipment and supplies provisioning, transportation, healthcare and other services.[9]

[9] The fieldwork conducted in 1999 in Southern Tanzania showed that hundreds of such businesses had been created by the recent mining boom, and that most had survived its downturn. Besides, a recent study by Tan Discovery found that the multiplier effect of mining activities is high, and that on average, one job in the TNCs' mines creates up to five more jobs, mainly though secondary business establishments.

There are other examples:

- AngloGold/Ashanti has made several social-economic investments in the local community worth $5.9 million between 1999 and 2005. These included support for education ($285,785), improvement of health facilities ($499,869), construction of a water pipeline from Lake Victoria to the Geita Gold Mine ($2 million) providing water to villages through several offtakes; and construction of the Kahama-Geita road ($2.6 million) that has opened up the Kahama-Geita corridor, benefiting surrounding villages, and support for microfinance ($115,677). In addition, 1,923 workers have been trained at a cost of $2.4 million;
- Placer Dome spent $3.5 million on local community activities from 2000 to 2005. The support included education ($287,609), health facilities ($69,835), water ($20,322), rural roads construction and improvement ($2,253,400), and other community contributions worth $893,323;
- SAMAX JV has invested in village water supply to the tune of $2.5 million;
- Williamson Diamonds provided support to surrounding local communities totalling $1.4 million between 1997 and 2005. This included education ($373,364), community health ($633,448), village water supply ($271,325), improvement of rural roads ($107,457), and other forms of community support ($10,945).

Although the contributions made to the communities are purely voluntary, neither the communities nor the Government perceive them as adequate, despite a lack of complete information on the benefits these TNCs are reaping from the mining sector.

f. Social impacts

Social impacts of mining TNCs on the surrounding communities can be both positive and negative. Some studies (Kulindwa et al., 2003), describe FDI mining operations as a "successful vehicle for social integration", arguing that such mining firms attract labour from all over the country. Mining communities, therefore, become more diverse than a typical Tanzanian village. As discussed above, some mining TNCs have launched specific social investment programmes (in health or education) to increase the "goodwill" of the neighbouring communities.[10]

10 Barrick Gold, which runs the Bulyanhulu mine through its subsidiary Kahama Mining Corporation, has established a fund to support various "charitable endeavors",

Two negative social impacts have been observed in mining areas in both local and TNCs mining areas, namely employment of child labour and HIV/AIDS. Assessments by the Government (2005) and Kulindwa et al. (2003) observed employment of child labour in mining. The main reason cited was the high level of poverty in these areas, which forces parents to send their children to work in the mines. According to George (2003), in small and large scale mining operations in the Geita District, 12.5% of the workforce were children. However, the same survey observed that "child labour is primarily a concern for small-scale mining operations, and very infrequently in large-scale mines" (George, 2003, p. 76). Children in this context are between the ages of 14 and 18, and their willingness and acceptance to work in the mines is due less to child labour employment and more to survival strategies arising from the lack of alternative employment or other income-earning opportunities.

The township or market segments that emerge from (or surround) the mining areas have often been identified with high HIV/AIDS prevalence. Several factors are attributable to this trend; most commonly mentioned from the literature are lack of awareness, a carefree attitude, widespread prostitution, and lack of access to quality health services (Kulindwa et al., 2003). The study by George (2003) in Geita mining operations also found similar problems that fuel the spread of HIV/AIDS. Granted, the problem of HIV/AIDS cuts across all sectors in the Tanzanian society and is not particularly tagged to the mining activities; however, such activities often provide an environment conducive to the wider spread of the pandemic.

g. Environmental impacts

The main challenge associated with mining in Tanzania is ensuring sustainability and integrating environmental and social concerns into mineral development programmes. Sustainable mining requires balancing protection of the flora and fauna and the natural environment against the need for social and economic development. It appears this trade-off is not being achieved; several studies have documented negative environmental impacts associated with small and large-scale mining in Tanzania (Mwaipopo et al., 2004; Kulindwa et al., 2003; Van Straaten et al., 2000; Appleton et al., 2004; Drasch and Boese-O'Reilly, 2004; Law Reform Commission, 2001). The 2001 Government Commission stated

which claims to be responsive to local needs and priorities (Barrick Gold Corporation, 2005). AngloGold/Ashanti has established a microfinance scheme with $115,677 seed money to assist small and medium enterprises access credit. Placer Dome has also established a fund to support local community activities.

for example, that "while it is true that small-scale mining endangers the environment, it is also true that large-scale mining is even more damaging" (Law Reform Commission, 2001, p.20).

Environmental risks do not result from TNCs' investments per se; rather, it is the large scale of their operations that is likely to raise some environmental concerns. For example, the survey by the Law Reform Commission observed that large-scale mining environmental concerns are linked to the breaking and exploding of rocks, which has been reported as a major nuisance to the local environment. The particular environmental issues concern land erosion and degradation, air pollution, water pollution, and noise pollution. According to George (2003), dust pollution in the area around the Geita Gold Mine has led to the pollution of drinking water sources of nearby villages. The mining firm currently supplies tap water to the local community (George 2003:71). Other impacts relates to deforestation (Kulindwa et al., 2003; George, 2003). Mining TNCs have made significant land clearance.[11]

The evidence on the environmental effects of large-scale mining suggests that mining communities may suffer a number of severe effects, ranging from direct and observable noise and erosion to longer term pollution of air, water and soil, which in turn may have serious health consequences. Nevertheless, the evidence does not allow for extrapolation, and more comprehensive analysis is required to obtain a clearer picture of the environmental implications of large-scale mining in Tanzania.

Despite the aforementioned problems, most mining TNCs in Tanzania comply with environmental standards, as set under the 1998 Mining Act. All TNCs have environmental management plans and conduct environmental impact assessments as condition for being awarded the special mining licenses. Environmental management plans include proposals for prevention of pollution, waste treatment, protection and reclamation of land and water resources and for the elimination or mitigation of adverse environmental effects.

The Extractive Industries Review (EIR) report undertaken between July 2001 and December 2003 challenges the view that TNCs are complying with this environmental requirement,[12] and questions

[11] For example, George (2003) reports that the Geita Gold Mine has acquired 110 square kilometres in Geita Forest Reserve, of which a significant proportion has been cleared for plant, housing and infrastructure.

[12] Given the importance and sensitivity of environmental effects on the sustainability of the mining industry, most companies have tended to conform to environmental policy

whether the World Bank's involvement in the extractive industries is compatible with its goals of promoting sustainable development and poverty reduction. In the report, the Bulyanhulu Gold mine was cited as "a premier example of where the involvement of multinational corporations in natural resource development had led to the further impoverishment, marginalization and violation of rural communities living in mineral rich areas". Nevertheless, anecdotal evidence so far in Tanzania does not give environmental standards the same (high) level of priority as the need for fair distribution of mineral revenues, not because they are not important but as a reflection of immediate needs for poverty reduction efforts (as environmental values are considered more of longer term impacts). The overall picture is an improvement of local community socio-economic infrastructure.

4. Policy

a. Investment and mineral policy

Tanzania has an open, investment friendly environment with adequate standards of investor treatment and protection. Overall investment activities are governed by the New Investment Policy of Tanzania launched in 1996 that was followed shortly by Tanzania Investment Act 1997. Within this overall policy, the mining sector has its own policy: *The Mineral Policy of Tanzania, 1997* and specific legislation; Mineral Act 1998, Petroleum Act and specific incentive structure; Fiscal Package 1998.

The mining policy is a result of economic reforms and restructuring efforts undertaken by the Government between the 1980s and 1990s. These reforms marked a clear shift in favour of private sector development and market-oriented economic management. In these new reforms, the role of government has been redefined from that of owning and operating mines to that of only providing policy guidelines, stimulating private investment and providing support for investment. Within this framework, the Tanzania Investment Centre was established in 1997 (for mainland Tanzania), and the Zanzibar Investment Promotion Agency (ZIPA), to act as one-stop investment facilitation and promotion entities.

or standards. So the issue is not whether or not a firm is pro-environmental standards but rather the extent to which these have been implemented.

b. Entry, licensing and establishment regulations

Foreign investors wishing to open and operate a commercial business venture in Tanzania must first be licensed as a business to meet the requirements of the Business Licensing Act 1972, administered by the Business Registration and Licensing Agency (BRELA), which is represented at the Tanzania Investment Centre. Enterprises seeking to invest in the mining or petroleum sectors are required to obtain registration and approval administered by the Ministry of Energy and Minerals. The procedure for licensing is simple and clear. Depending on the investor requirement, the following licenses are issued:

Prospecting license. A prospecting license is granted for an initial prospecting period of not more than three years, except in case of an application for a prospecting license for gemstones where the period may not exceed two years and is subject to renewal. A prospecting license covering a preliminary reconnaissance for all minerals other than building materials and gemstones may be granted for a period of not more than two years.

Retention license. The holder of a prospecting license may be granted a retention license for a period of not more than five years, and this may be renewed for a single period of five years. The idea is to grant a license for a holding period when an exploration programme and feasibility studies have identified the existence of a significant ore body, which cannot be immediately developed as a mine because of adverse market conditions.

Special mining license. A special mining license is granted in respect of the development and production stages of a large mining operation. The license may be granted for a period of not more than 25 years or the estimated life of the ore body, which it is proposed to mine, whichever is shorter. Once application has been duly made, it may be renewed for a period not exceeding 25 years. Applications for special mining licenses must be accompanied by the following documents:

- Proposal of mining operations;
- Environmental Management Plan;
- Proposal on employment of citizens of Tanzania; and
- Environmental Impact Assessment.

Once the application is received, it is submitted for advice to the Mining Advisory Committee, which is chaired by the Permanent Secretary, Ministry of Energy and Minerals, and include representatives from civil society organizations (Tanzania Chamber of Mines), and technical staff of the Ministry, before issuing of license. A special mining license confers on the holder exclusive rights to carry out mining operations in the mining area and to dispose of any mineral product recovered.

Mining license. A mining license is granted for the development and production stages. The license may be granted for a period not exceeding ten years or the estimated life of the ore body, whichever is shorter. The license may be renewed for a period not exceeding ten years. The application is submitted with a feasibility study, environmental management plan, and environmental impact assessment.

Gemstone mining license. This is granted for a period of ten years, renewable. All applications are accompanied by proposed mining activity, environmental management plan and environmental impact assessment.

c. Fiscal provisions

Input taxes. Import duty, value-added tax (VAT) and excise duty are exempted for mining equipment and supplies directly related to the mining operation up to one year after the start of the operation. A cap limit of 5% customs duty on imports of capital equipment and supplies apply thereafter. VAT on domestic sales is 20% and zero-rated VAT in exports. VAT paid is fully recoverable and there is full relief from VAT for services or goods exclusively for mining activities. Mineral rights holders are exempted from paying withholding tax on goods or services supplied by them. Withholding tax on technical service payments to subcontractors is 5% to residents and 15% to non-residents.

Other taxes. Royalties are charged on the net book value of the minerals sold at the rate of 3% for gold and other minerals, and 5% for diamonds and other gemstones. However, in order to promote value-added activities and reduce smuggling, no royalties are charged on cut and polished gems. There is no export tax or stamp duty on sales of minerals. Corporate tax on income from mining activities is 30% of the net income of the corporation, which is the standard determined from all types of investments in Tanzania.

d. Standard of treatment and profit repatriation

Policy priority in Tanzania is to treat foreign investors on a par with domestic investors. The provisions of the 1997 Act apply to both foreign and local investors without distinction, with the important qualification that the benefits and protection to be accorded by the Act to a foreign investor require a minimum capital investment of $300,000 but are extended to a local investor on a capital investment of $100,000.

Under Section 21 of the 1997 Act, FDI projects with a certificate of investment are guaranteed unconditional transferability of FDI-related payments abroad through any authorized dealer bank in freely convertible currency. This covers FDI remittances of net profits and dividends; service charges for foreign loans; royalties and technology transfer charges; the proceeds of FDI liquidations or sale of capital assets in Tanzania; and salary payments to expatriate staff employed in Tanzania by the registered foreign company. Tanzania does not have exchange control restrictions, and the foreign exchange payment framework is held by most FDI executives to be strongly supportive of FDI. According to UNCTAD (2002), the exchange regime "is probably the most important single factor contributing to the striking improvement in the investment climate that has taken place in recent years".

e. Expatriate labour and immigration

The Immigration Act 1995 and Financial Laws Act 1997 assign the management and administration of expatriate employment to the Tanzania Investment Centre. In Zanzibar, this responsibility is vested with ZIPA. The provisions allow automatic employment of five non-Tanzanians and additional expatriates can be requested from Tanzania Investment Centre if the need is felt by the investor. Decisions for extra expatriate employees are reached with little delay where there are no qualified Tanzanians for a particular skill category.

f. Investor protection and dispute settlement

Section 22 of the 1997 Act provides that no business enterprise shall be nationalized or expropriated by the Government, and that no person who owns, whether wholly or in part, the capital of any business enterprise shall be compelled by law to cede his interest in the capital to any other person.

The 1997 Act contains provisions (section 23) for the negotiation and settlement of disputes among Tanzanian and foreign enterprises,

Tanzania Investment Centre and the central government. Where the preferred amicable settlement via negotiation between the parties is not achieved, the parties may then seek agreement through the arbitration laws of Tanzania, through the International Centre for Settlement of Investment Disputes or within appropriate bilateral and multilateral treaties. Zanzibar has similar provisions. To date, there have not been any disputes in the mining sector involving FDI investments.

g. Distribution of mining revenue and transparency

Except for the fiscal requirements stated above with regard to royalty and other taxes, Tanzania does not have policy or legal requirements on how mining revenue should be shared between the investor, the central government, local government and local communities. Neither mining TNCs nor Government or other stakeholders have taken initiatives to frame policies on rent distribution that would be beneficial to all parties, including concerns for future generations. The mining policy states that "there is no legal obligation for the State to participate in either mining ventures or requirement for local equity, except in gemstone mining, which requires Tanzanians to have not less than 25 per cent shares in gemstone mining and trading licenses". As a result of lack of a clear and adequate revenue-sharing mechanism, it is estimated that revenues to Government from FDI mining operations are a small (1.2%) share of total government annual domestic revenue. Likewise, the philanthropic contribution to the local communities is considered as negligible.[13] Until the last two years or so, there have not been any specific efforts or attempts to introduce laws and policies to improve distribution of mining revenues, as greater policy priority was placed on attracting TNCs to the industry.

In an attempt to redress the imbalance in mining revenue sharing, the Government recently announced the need to review mining contracts with the goal of ensuring that "mineral resources in the country benefited the investor, the government and local communities".[14] In his announcement, President Jakaya Kikwete cited two TNCs that had successfully concluded review agreements to that effect – Barrick Gold Corp and Resolute Tanzania. In particular, the reviewed agreements will enhance compensation for people who are evacuated to make way for mining activities and provide more revenue to Government through

[13] Note that detailed and reliable data on profits of the companies were not readily accessible for our purposes.

[14] *Daily News*, 9 February 2007.

payment of agreed taxes, including royalty and corporate tax. This is a short-term measure. There is a need to review current policy to ensure that mining resources are mutually beneficial to investors, Government and local communities, and take future generations into account.

Tanzania has made some progress in reducing corruption since 1996, when a presidential commission led by Judge Warioba produced its (*Warioba*) Report.[15] It is implementing a National Anti-Corruption Strategy and has strengthened the institutional framework – notably through the Finance Act of 2001 and the Public Procurement Act of 2002 – and has adopted a clear zero-tolerance position on corruption.[16] Nonetheless, allegations are being investigated by the country's anti-corruption bureau (PCB) concerning matters related to issuing mining contracts (both local and foreign) and misappropriation of revenue (with regard to the Gold Assayer Alex Stewart).

The current policy framework in Tanzania is not adequate for sound management of natural resources and the mitigation of negative externalities. Presently applied instruments for revenue generation do not address externalities, nor are they used as instruments to capture rents from natural resources in a transparent manner. Rather than employing fiscal instruments to steer the exploitation of resources, there is, allegedly, tax evasion within the mining and other sectors, denying the Government much-needed financial resources for implementing plans and development strategies. The Government has directed PCB, the Tanzania Revenue Authority (TRA) and the Controller and Auditor General (CAG) to take legal measures against any accounting officers and firms/individuals found misappropriating Government revenue. The issue of corruption has been addressed at the macro level by strengthening both the legal and institutional aspects of the anti-corruption bureau (PCB).

h. Environmental protection

Tanzania is becoming increasingly aware of environmental consequences that have adverse effects. In this regard, the National Environmental Management Council (NEMC) has been established to provide guidance and advice on environmental issues. The present

[15] See Economic and Social Research Foundation (ESRF) and Front against Corrupt Elements in Tanzania (FACEIT) (2002) for a general summary of the Warioba Report and progress against corruption over the past decade.

[16] Economic and Social Research Foundation (ESRF) and Front Against Corrupt Elements in Tanzania (FACEIT) (2002).

regulatory framework for environmental protection is the National Environmental Act of 1983, which is undergoing review. Tanzania has draft national environmental impact assessment guidelines and requires all mining operations to prepare environmental impact assessments for their investments. All FDI mining investments follow good environmental management practices, and two have won the "Presidential Environmental Excellence Award" – Resolute (Tanzania) or Golden Pride Mining located in Nzega and Geita Gold Mine. Geita Gold Mine Company has also demonstrated environmental excellence by achieving the ISO 14001 international standard for environmental management.

The laws and regulations have not been fully implemented because NEMC, the organization in charge of environmental issues, lacks legal powers for enforcement, as it plays only an advisory role. The draft bill under preparation since October 2006 is expected to give NEMC legal powers to enforce laws and regulations as well as establish a National Environmental Regulatory Body tasked, *inter alia*, with reducing or eliminating the adverse environmental effects of mining; improving health and safety conditions in mining areas; and addressing social issues affecting women, children and local communities.

5. Conclusions and recommendations

Tanzania is richly endowed with mineral resources. Since the mid-1990s, the mining sector has been the fastest-growing sector in the economy, following liberalization of the economy and adoption of favourable investment policies and a general regulatory framework coupled with specific measures for the mineral sector. The period has seen increasing inflows of FDI and a rapidly growing presence of TNCs in the mining sector, with an overall positive (albeit limited) impact on the economy and negative implications for the environment. The key conclusions from the case study are as follows:

a. Tanzania has been successful in attracting TNCs to the mining sector, among other reasons due to its attractive investment policy with lucrative incentives.

The case study lists several TNCs that have successfully established operations in the Tanzania's rich mining sector. Together, the TNCs have invested over $1,376.3 million in Tanzania's mining sector over the past ten years.

b. The TNCs mining investments are having a development impact, but the impact is limited in size and to specific areas.

Three issues are notable in examining the impact of TNCs on Tanzanian mining. First, the impact on export revenue, employment, technology, skills and knowledge, and Government revenue is significant in relative terms, given the low base from which the industry grew from in the late 1990s. Second, regardless of its share of revenues accruing to the TNCs, and the social cost of the environmental degradation associated with the mining operations, the value of the impact of contribution by mining TNCs on local communities is notable, given the high demand for various socio-economic services and infrastructure.. Finally, the developmental impact of FDI in mining is further eroded by its lack of substantial economy-wide multiplier effects, as would be suggested by the "trickle-down" theorem. However, this is purely a policy failure argument in that the obvious lack of significant linkages to the rest of the economy arises mainly from weak supply capacity and an incomplete supply chain owing to low level of industrial development, a shortage of skills and poor infrastructure. Based on various anecdotal evidence, the economy's failure to benefit significantly from the industry (and particular TNCs) underlies the basis for public pressure to revise the mining (investment) policy to provide an avenue for increasing mining royalties and discouraging exports of raw (uncut) minerals.

c. The various social and environmental concerns, although not specific to TNCs mining operations, are key as far as reviewing their sustainability and mining policy is concerned.

First, there is a growing prevalence of HIV/AIDS infection in communities surrounding the mines. Mining operations have indirectly contributed to the growth of small market towns with young affluent men and women, increasing the risk of spreading the epidemic. This HIV/AIDS problem, however, cuts across all sectors in the Tanzanian society, threatening to slow economic growth and wipe out gains in life expectancy achieved in the past decade. Second, several studies have observed employment of child labour in both small-scale and large-scale mining operations. This is contrary to Tanzanian law and international practice on decent work. Environmental concerns relate to land erosion and degradation, air pollution, water pollution and noise pollution (linked to breaking and exploding of rocks). All TNCs have conducted

environmental impact assessments and some have even been awarded the ISO 14001 international standard for environmental management, although much remains to be done to eliminate adverse environmental effects as a way of achieving sustainable economic development.

d. Tanzania's mining policy and legal framework is highly attractive to TNCs but less so to local mining companies.

Tanzania has an open, friendly investment environment with adequate standards of investor treatment and protection. The new open-door policy has added Tanzania to the list of countries that earn improved treatment by international insurance agencies. The fiscal regime is also overly pro-investor, without adequate provision for fair and equitable distribution of the benefits of mineral resources between investors, Government and local communities.

More importantly, in Tanzania, local investors in the sector feel largely neglected by the policy, as they claim to receive relatively fewer incentives. Two conclusions are worth noting in this case. First, however attractive, the provisions offered to foreign investors are not applicable to domestic investors – and are deliberately made to promote increased flows of foreign investment and their benefits to the economy. Second, size matters when accessing or qualifying for certain (lucrative) fiscal incentives. Compared to the TNCs, domestic investments are far smaller in terms of value and most of them are artisanal, as a result of which they fail to qualify for such incentives. In fact, others have grown to the threshold level but are not yet sufficiently large to receive similar incentives as TNCs. So the incentive system, while attractive, consists of deliberate fiscal measures that cannot be provided to achieve equity but rather certain economic goals. Nevertheless, put together, domestic investors make up a significant proportion of the industry; although they have smaller per unit value, they have a substantial impact especially with regard to re-investment of mineral revenue in the economy, tax revenue and employment.

Based on the above conclusions, the following broad recommendations are made.

(i) Review mining policy and laws to provide for fair and equitable sharing of mining resources

Since the mid-1990s, the mining sector has been the fastest-growing sector in Tanzania, fuelled largely by mining TNCs. However,

the sector's effectiveness in playing the role of an engine for growth and poverty alleviation is limited by its weak linkage with other sectors of the economy and the low level of private sector development in the country. One feasible way to address this problem is to hasten the ongoing review of mining policy and laws to provide for more fair and equitable sharing of mining benefits between investors, Government and local communities. First, the review will ensure honest recording of mineral revenue and revision of royalties. Second, the Government should engage in further dialogue with TNCs and other mining companies to retrospectively consider reinvesting part of their profits in the country. Finally, it should provide a framework for better and more effective adherence to corporate social responsibility principles.

(ii) Promote value addition from mining outputs

Currently, very little of the mineral ore recovered is processed in-country. As a result, the country remains a primary producer and exporter, earning low returns compared with sales of processed produce. This also reduces leakages with the local economy and transferability of technology. Encouraging value addition should also become an avenue for increasing employment and holds greater prospects for Tanzania's mineral resources to play a key role in the development of the economy. Achieving this, however, requires building the capacity of Tanzanian industries so that more value-added processing can take place within the country. Ongoing initiatives to empower Tanzanians (entrusted to the newly reformed Ministry of Planning, Economy and Empowerment) through private sector development, promotion of SMEs, further investment infrastructure and business environment strengthening are measures in the right direction.

(iii) Increase TNCs' linkages to the domestic economy

Mining TNCs may have positive effects for local communities through improvement of basic infrastructure. However, there is no indication that the expansion in the mining sector triggers significant growth in the local economy, partly because TNCs' mining operations are generally detached from local supply chains. Creating avenues for domestic investors to enter into partnerships with foreigners in the ownership and management of companies could improve linkages with the local economy. One way of doing this is to institutionalize joint-venture partnerships between TNCs and local owners of mining land and to let local authorities administer mining licences directly, so as to forge

partnerships between companies and local government and encourage them to retain a substantial share of licensing revenue.

(iv) Conduct strategic environmental impact assessments

Most TNCs' mining properties are located within the Lake Victoria Basin. Current practice is for each investor to conduct an independent environmental impact assessment for its project. Such assessments are likely to miss out the cumulative impacts associated with mining operations around the lake. A strategic environment impact assessment for the entire Basin would more effectively integrate the environmental, social and economic impacts of mining projects in the area. In addition, a strategic environmental impact assessment could facilitate strategic decision-making, including spatial planning; improve the quality of policies, plans and programmes, and ultimately foster the sustainable development of the Lake Victoria Basin and mining sites.

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Annex: Tanzania Development Vision 2025

The Government of Tanzania hopes to have created a stable, peaceful, middle-income country that cherishes shared growth and improved living standards for its entire people. The overall long-term development goals aim at the following:

- Attaining a high rate of economic growth (averaging 8–9% per annum);
- Satisfying the basic needs of the people, eradicating poverty and attaining economic and social justice by giving all citizens equal employment opportunities while paying special attention to gender balance;
- Promoting good governance, democracy, the rule of law, integrity and moral uprightness so as to promote and sustain peace, political stability, national unity and social cohesion;
- Ensuring sustainable exploitation and use of all natural resources for the benefit of current and future generations;
- Achieving the highest level of ingenuity, self-confidence and self-esteem by building a self-reliant nation whose way of life reflects its own history, culture, resources and aspirations.

RESEARCH NOTES

Social and human rights implications of TNC activities in the extractive industries

Peter Muchlinski

TNC operations in extractive industries can be associated with abuses of social and human rights in certain circumstances. For instance, competition over resource wealth may spark armed conflict in some countries, and even the formation of rebel groups; or, as another example, control of resources by the Government (may be linked to corruption and an inequitable distribution of public resources. This article examines the categories of human rights abuses which may occur, as well as the responsibilities of TNCs and other corporations in this regard. The latter is discussed in the context of "new players", such as those from developing countries, the complex structures of many TNCs, and their governance (e.g. some are state-owned enterprises). The article concludes by assessing the roles that Governments, TNCs, NGOs and others can play in achieving a viable balance between a favourable investment environment in extractive industries and the interests of local populations.

The extractive industries are among the most prone to concerns about social implications of the activities of transnational corporations (TNCs). This partly reflects the fact that the location of such projects is dependent on the distribution of natural resource deposits. Many deposits are found in countries with weak governance structures and/or with major political, social and economic problems. In the case of an investment, TNCs have to face the realities of the local political, social and economic environment. Accordingly, the social dimension of natural resources investment takes on a key role in the overall policy environment.

The relationship between natural resource extraction and human rights abuses is well documented.[1] The apparently frequent incidence of such a link has led to what some call the "resource curse". Two principal types of cases may characterize this. First, competition over resource wealth may spark internal armed conflict and even the formation of rebel groups. Second, government

[1] See, for example, ESCR-NET (2005), Amnesty International (2003, 2005), Frynas (2000), Human Rights Watch (2005) and Kline (2005, ch.4).

control of resource revenues may be linked to "endemic corruption, a culture of impunity, weak rule of law, and inequitable distribution of public resources" (Ganesan and Vines, 2004, pp. 304, 305). According to the International Network for Economic, Social & Cultural Rights, "such unaccountable governments – sometimes called "predatory autocracies" – are more likely to commit human rights abuses, and to prolong armed conflict"(ESCR-NET, 2005, p.17).

As noted in the introduction to this section, companies in the extractive industries may be more likely to operate in countries with weak governance regimes, as they follow the location of the natural resources. Avoiding investment in such places would mean foregoing access to essential natural-resource deposits. Thus, a strategy of disengagement from, or non-investment in, countries with poor human rights records is only seldom pursued by TNCs in these industries. Indeed, once the major expenditure in extractive capacity has been made, the sunk costs involved may render disinvestment economically unfeasible. Meanwhile, non-investment may result in a competitor taking up the investment.

Given the characteristics of the "resource curse", coupled with the often significant environmental effects of investment in natural resource extraction projects, the principal types of human rights abuses that TNCs in the extractive industries have been associated with tend to fall into a number of certain categories. First, firms may find themselves implicated in conflicts generated by local competition for control over natural resources. This may lead to the firm "taking sides" in the conflict and assisting in the violations of human rights committed by the group that it supports. For example, the firms may offer assistance to government forces or to forces of opposition where they control the region in which the natural resources are located. Such assistance is likely to take the form of financial aid or access to the use of corporate assets in the course of the conflict.[2]

Second, firms may become complicit in human rights abuses where they knowingly benefit from repressive governmental policies, as where protests against the natural resource project in question are forcibly suppressed; where they obtain benefits from forced labour, as in the case of the Yadana and Yetagun pipeline project in Burma;[3] or

[2] Assistance to both Government and rebel forces has been alleged to have been given by natural resource firms operating in recent years in the Democratic Republic of Congo. See ESCR-NET (2005, pp. 14–15) and in Sudan, see Kline (2005, pp. 57–62).

[3] This led to a major case under the United States Alien Tort Claims Act against Unocal: see *Doe v Unocal Corp.* Judgment of 18 September 2002: 2002 U.S. App. LEXIS 19263 (9th Cir 2002); 41 ILM 1367 (2002). This decision was in turn vacated on

where they gain access to the mineral deposits as a result of the forced resettlement of indigenous populations.[4] Third, firms may commit violations of human rights through extensive industrial pollution of, or other environmental damage to, the region in which they operate, resulting in threats to the lives, health and livelihoods of the indigenous population.[5] A fourth category of abuses arises out of the operations of security forces contracted by the natural resource company to safeguard its assets and employees. Instances have arisen where the personnel of such forces have engaged in illegal assaults and killings of persons perceived as a threat to the investment.[6] Although the use of security forces may be justifiable in principle, the question arises as to the nature and extent of the responsibilities of the firm to control their activities. This will be considered further below.

Cases of human rights abuses and the responsibility of corporations in this regard raise many difficult normative questions. First, given the origins of international human rights standards as benchmarks for the control of governmental behaviour, how far can such standards apply to privately owned non-State actors such as corporations? According to

14 February 2003 to be reheard by the *en banc* Court of Appeal for the Ninth Circuit: *John Doe v Unocal* 395 F.3d 978; 2003 U.S. App. LEXIS 2716. The case settled in December 2004: "Unocal settles Burma abuse case" *Financial Times* 14 December 2004 p. 12.

[4] Such a situation arose in Sudan where, in the course of the civil war that ended after twenty-one years in 2005, the Government forcibly displaced hundreds of thousands of civilians in Western Upper Nile/Unity State without notice or compensation. Several oil companies, including Talisman Energy of Canada, were seen by Human Rights Watch as having been complicit in there abuses, not only by reason of their silence but also because Government forces used the infrastructure built by Talisman and the Greater Nile Petroleum Operating Company (GNPOC) in which Talisman was the lead partner including an airfield and a road network, to carry out attacks on civilians and civilian infrastructure. After initial denials, Talisman acknowledged that Sudanese forces had used the company's airstrip for 'non-defensive purposes'." ESCR-NET, 2005, at p.14. This case also generated a claim under the United States Alien Tort Claims Act: *The Presbyterian Church of Sudan v Talisman Energy and the Republic of Sudan* Opinion of 13 June 2005: 374 F.Supp. 2d 331; 2005 U.S.Dist. LEXIS 11368.

[5] For examples see ESCR-NET, 2005 at pp.#20-22.

[6] A classic illustration is the case of BP in Columbia, where security forces carried out human rights violations, including the killing, in 1995, of a local organizer of protests against the environmental effects of BP's investment in the Casanare region (Pearce, 1999). See, for a more recent example the allegations made against Exxon concerning the abuses of security forces hired from the Government by the firm in Aceh Province in Indonesia: *John Doe et.al v ExxonMobil Corporation* Civil Action No. 01-1357 (LFO) FIRST AMENDED COMPLAINT FOR EQUITABLE RELIEF AND DAMAGES dated 20 January 2006 and available at: http://www.laborrights.org/projects/corporate/exxon/Exxon%20First%20Amended%20Complaint%20Jan%2006.pdf.

John Ruggie, the United Nations Special Representative to the Secretary-General on Business and Human Rights, given the lack of international legal personality of corporate actors, they cannot be directly bound by international law as such, and that, apart from certain narrowly drawn responsibilities in the field of international criminal law, corporations have no existing international obligations in the field of human rights, as most codes are voluntary in nature and are addressed to States (Ruggie, 2006, paras 60–65).

However, at the level of "soft law", the non-binding Universal Declaration of Human Rights (UDHR) addresses both governments and "other organs of society". Following this provision, the third recital of the Preamble to the United Nations Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights (hereafter UN Norms) recognizes that, "even though States have the primary responsibility to promote, secure the fulfilment of, respect, ensure respect of and protect human rights, transnational corporations and other business enterprises, as organs of society, are also responsible for promoting and securing the human rights set forth in the Universal Declaration of Human Rights"(United Nations, 2003). Thus, while in strictly legal terms, TNCs are not subject to human rights obligations, this cannot absolve them from a moral duty to observe human rights. Furthermore, developments in national laws may impose human rights obligations on TNCs that are located in the relevant jurisdiction. For example, United States courts have accepted that, in principle a corporation can aid and abet a tovernment in the commission of human rights violations and that an action may be brought against it under the Alien Tort Claims Act (Joseph, 2004; Muchlinski, 2007, ch.13; Clapham, 2006, ch.6).

Second, in a developing-country context, can the goal of economic and social development, as expressed through the right to development, ever justify a restriction of other human rights? If this proposition were to be accepted, it would introduce a hierarchy of human rights, placing the right to development at its apex. This would be contrary to the consensus that all human rights are universal and indivisible and that the observance of *all* such rights is important. However, this does not mean that a government may never place qualifications or restrictions on the enjoyment of human rights. For example, it is possible for a government to derogate from certain human rights in cases of urgent national emergency, though this does not extend to so-called "non-derogable" rights such as the right to life or the prohibition against

torture or inhuman or degrading treatment.[7] In addition, certain human rights, such as freedom of speech or freedom of association, may be subject to restrictions that are necessary in a democratic society for the protection of certain essential public policy goals, such as the protection of public moral or public health. The text of the relevant provision in the human rights instrument will outline the scope of this discretion.[8]

Third, given the complex structure of many TNCs and the use of independent subcontractors to carry out various corporate functions (of which the employment of independent security forces is perhaps the most pertinent example), the precise scope of corporate responsibility raises the issue of what constitutes the company's "sphere of influence" over human rights infringements.[9] In the case of security forces, the corporation may be able to secure compliance with basic human rights standards by reason of the terms of the contract under which the security force is hired. Thus, it may be said that the security force is within the company's "sphere of influence". Should that force act in a way that violates human rights, its contract could be summarily terminated.

Equally, firms can actively ensure that security forces that are known to have committed human rights violations in the past are not employed. As regards the matters that a firm should consider when deciding on its security policy, the Voluntary Principles on Security and Human Rights may offer useful guidance. The Governments of the United States, the United Kingdom, Norway and the Netherlands plus companies operating in the extractive and energy sectors and non-governmental organizations, all with an interest in human rights and corporate social responsibility, have engaged in the dialogue on security and human rights and have collectively developed the Voluntary Principles on Security and Human Rights (Voluntary Principles 2007).

Fourth, the extent to which a corporation should be involved in the events leading to the alleged violation of human rights, before being held responsible, needs to be considered. This is the question of what constitutes "complicity" in the violation of human rights. It is a key issue, especially as most of the cases outlined above will involve direct governmental action as part of the chain of events giving rise to the violation. In this regard, the United States courts have held that a

[7] See for example Article 4 of the International Covenant on Civil and Political Rights (ICCPR) and Article 4 of the International Covenant on Economic, Social and Cultural Rights (ICESCR).

[8] See for example Article 19 ICCPR (freedom of speech) and Article 22 ICCPR (freedom of association).

[9] On the issue of the "sphere of influence" see Clapham (2006, ch.6).

corporation can be found to have aided and abetted a Government in the commission of human rights violations. This allows for a finding that a corporation may be liable even if it has not directly taken part in the alleged violations, but has given practical assistance and encouragement to the commission of the crime or tort in question and has actual or constructive knowledge that its actions will assist the perpetrator in the commission of the crime or tort.[10]

Finally, the issue of monitoring and enforcement of human rights standards needs to be considered. At present, there is no binding international mechanism for holding TNCs to account for human rights violations. The United Nations Global Compact is a purely voluntary initiative with two objectives: to mainstream the ten principles it promotes in business activities around the world, and to catalyse actions in support of UN goals. In addition, companies that do not deliver on their Global Compact commitments face the risk of being delisted from the programme.

Turning to the United Nations Norms, their legal force has not been fully settled (Muchlinski, 2007, ch.13). However the United Nations Human Rights Commission, in resolution 2004/116 of 20 April 2004, expressed the view that, while the Norms contained "useful elements and ideas" for its consideration, as a draft, the proposal had no legal standing. Indeed, the United Nations Special Representative has criticized the Norms as an exercise that "became engulfed by its own doctrinal excesses" making exaggerated legal claims as to the applicability of existing human rights instruments to corporations and creating, "confusion and doubt even among many mainstream international lawyers and other impartial observers." (Ruggie, 2006, para. 59) The main influence of the Norms has been to establish a list of issues that may be relevant for the development of a human rights framework for companies in their own efforts to comply with human rights standards as a matter of good business practice (Business Leaders Initiative on Human Rights, 2006).

The discussion on the extension of the human rights standard to corporations raises a further general issue. What are the implications for the "new players" from developing countries in the extractive industries? At the outset, it should be noted that all countries have subscribed to the Universal Declaration of Human Rights and so accept, at least as a moral imperative, that all organs of society in their territory should observe fundamental human rights. In this light, it can be argued that the debates

[10] See the Unocal case in footnote 3.

on corporate social responsibility and human rights pertain equally to such firms, as they do to the established TNCs from developed countries (UNCTAD, 2006, p. 232). However, in the extractive industries, the issue is further complicated by the fact that many TNCs from developing countries are State-owned, raising potential issues related to corporate governance and transparency (UNCTAD, 2006, p. 233).

Nonetheless the "new players", whether they are publicly or privately owned and controlled, may derive considerable operational benefits from complying with basic human rights standards as part of a wider corporate social responsibility policy. In particular, operations in high-risk zones may require greater attention to human rights compliance so as to ward off accusations of complicity with such abuses which could lead to adverse economic consequences (such as, for example, embargoes being placed on the products of such companies by the home countries of their principal competitors, or by way of consumer boycotts). Another consequence may be increased difficulties in obtaining access to finance through the public offer of shares and increased risk of exposure to foreign direct liability litigation, as under the United States Alien Tort Claims Act (UNCTAD 2006, pp. 235–237). Thus, it should be in the interests of all firms to comply with such standards.

Taking future developments into consideration, human rights considerations will play an increasingly significant part in the operations of TNCs in the extractive industries. Already, in response to earlier instances of alleged complicity in human rights violations, firms have reconsidered their decision-making processes and have introduced human rights and other social responsibility-related concerns into these processes.

Furthermore, home countries have introduced human rights and environmental impact considerations into their national investment insurance schemes. For example, the United States Overseas Private Investment Corporation (OPIC) will not grant insurance for an investment where the project, in the judgment of OPIC, would have an unreasonable or major adverse requirement on the environment or on worker health and safety. Minimum labour rights must also be respected and the applicable national corrupt practices laws complied with.[11] Likewise, the United Kingdom Export Credit Guarantees Department (ECGD), as a result of the 1999–2000 governmental review of its mission and status, must now take into account the contribution of an investment to

[11] OPIC Program Handbook (Washington DC, OPIC, 2004) available at www.opic.gov at pp. 4–5.

sustainable development and to the promotion of human rights and good governance.[12]

Host countries can contribute to an improved human rights environment by following good governance principles in the conduct of their economic policies, promoting respect for the human rights of those who are affected by a major extractive investment. Particular attention may need to be paid to the concerns of indigenous minorities which may be especially vulnerable to such infringements due to their weak political position in the host country. In this connection, a rebalancing of the legal framework for the extractive industries may be required. According to the Nordic Africa Institute (NAI):

> "The current process of redefining the role of the State through the introduction of increasingly standardized legal and fiscal frameworks intended to create a favourable investment environment, but at the expense of the State's capacity to respond to the challenges of development, is neither viable nor in the interest of local populations or of foreign investors."(Campbell, 2004, p. 85)

One way to achieve a more viable balance between a favourable investment environment and the interests of local populations is to build human rights standards into the regulatory regime of the host country. This could be left to the corporations themselves through the adoption of voluntary codes of practice and adherence to international guidelines such as the OECD Guidelines for Multinational Enterprises (OECD, 2000). However, that may be an inadequate response given the absence of external monitoring and enforcement mechanisms. This could be improved by involving the monitoring of the firm's conduct by way of a partnership with an NGO that could report on the human rights impact of the firms plan's and operations in the host country. In addition, positive State regulation may be introduced through legal requirements to observe human rights being imposed on the corporation.[13]

Apart from the host and home countries and the TNCs concerned, NGOs can act as a catalyst for further development of human rights considerations in extractive industry projects. Indeed, it is mainly due

[12] See Department of Trade and Industry *Review of ECGD's Mission and Status* Cm 4790 (London, July 2000) and ECGD *ECGD's Business Principles* (December 2000) available at www.ecgd.gov.uk

[13] This was done, for example, through the addition of a human rights undertaking to the Baku-Tiblisi-Ceyhan investment agreement between the three host countries and the consortium of oil and gas companies charged with the construction and operation of the project (Leader, 2006).

to the monitoring of firms by NGOs, and to publicity given to major cases of complicity in human rights violations by such bodies that the issue has gained ascendancy in recent years. Further monitoring and consciousness-raising can be expected to occur as and where future cases arise. Particular attention may be paid to the "new players" from developing countries, which may themselves have poor human rights compliance records, or where corporate social responsibility standards are poorly developed. Indeed, it may be the case that where a developed county TNC is involved in allegations of complicity in human rights abuses, it may choose to divest and it will be replaced by a "new player" from such a country. This has occurred in Sudan, where Austrian, Canadian and Swedish companies were replaced by Chinese, Indian and Malaysian investors.

Investment institutions may also have a part to play. According to the NAI:

> "Stock exchanges in the countries where mining companies are registered should establish corporate social responsibility disclosure requirements, modelled on corporate governance guidelines. As part of their listings requirements, companies would be required to disclose in their annual reports or annual information circulars their approaches to corporate social responsibility, evaluate the extent to which these practices conform to the corporate social responsibility guidelines set out in stock market listing rules, and explain any discrepancies." (Campbell, 2004, p.85)

Such changes could offer greater transparency. Whether a poor human rights record will lead to a decline in the share price of the company is less certain (see Zadek and Forstater, 1999), though it is possible if investors continue to pay greater attention to such matters when valuing the firm. In this regard, consciousness-raising of the risks inherent in investing in weak governance zones, by industry groups and NGOs, may serve to heighten investor awareness of the financial consequences of non-observance of human rights [14]

Finally, it may be necessary to get the "new player" companies more involved in existing international initiatives. In this connection there may be a need for capacity-building on human rights and conflict risk assessment. For example, many companies use the Danish Institute for Human Rights Human Rights Compliance Assessment (HRCA), allowing

[14] On the other hand, this could lead to capital flight from such zones, precipitating a further decline in their capacity to sustain good governance.

firms to run down a check-list of issues pertaining to the human rights practices of the firm.[15] International Alert has produced a publication, Conflict-Sensitive Business Practice: Guidance for Extractive Industries (CSBP), which it is piloting in Colombia and elsewhere. CSBP includes risk and impact assessment and screening tools, as well as specific guidance on "flashpoint issues" such as indigenous people, dealing with armed groups, transparency, and security, and identifying legal standards and best practices. CSBP also includes a discussion of the limitations of environmental and social impact assessments (ESIAs)[16] (United Nations Special Representative, 2007, para. 33).

In addition, the International Business Leaders Forum (IBLF), the International Finance Corporation (IFC) and the United Nations Global Compact are jointly producing a guide to human rights impact assessments for business. The guide is intended to outline a process by which operational managers can identify human rights implications and challenges, and annotate other relevant sources of information and expertise. It is due to be published in March 2007, then tested by companies in different sectors and finalized in 2009[17] (United Nations Special Representative, 2007, para. 31). Further similar initiatives are being taken by other bodies (United Nations Special Representative, 2007, paras 30-36), leading the United Nations Special Representative to say that:

> "Given the proliferation of public information on human rights, including the numerous specialized resources for business (e.g. the Maplecroft maps, the Business and Human Rights Resource Centre, the aforementioned Danish Institute and HOM tools, and business-specific research by Amnesty International and Human Rights Watch), there is no excuse for any company, lender or investor to claim to be unaware that their investments could impact human rights." (United Nations Special representative, 2007, para. 40).

This comment may be taken to apply to the old and new players alike in the extractive industries.

[15] See https://hrca.humanrightsbusiness.org/.

[16] See International Alert, http://www.international-alert.org/our_work/themes/extractive_industries.php.

[17] See http://www.ifc.org/ifcext/enviro.nsf/Content/OurStories_SocialResponsibility_HumanRights.

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Internationalization of TNCs from the extractive industries: a literature review

Romy Kraemer and Rob van Tulder

The literature on the nature, shape and logic of internationalization of extractive industry TNCs is rather fragmented and poorly developed. This is a mounting problem since extractive industries are not only becoming increasingly important, but their operations have also become increasingly controversial. This article takes stock of three types of approaches towards internationalization. First traditional *intrinsic motives*, which represent an 'international management' angle and focuses on the resource-seeking, efficiency-seeking and strategic asset-seeking nature of extractive TNCs. Secondly, traditional *extrinsic motives*, which represents a more political economic angle towards extractive industries, and which builds on a bargaining perspective of internationalization. Thirdly, a modern extension of extrinsic motives to internationalization will be added, which considers the increasing role of Non-Governmental Organizations as factor in shaping the internationalization trajectories of extractive industries. This approach represents a 'stakeholder' approach to firm strategies. It considers the societal position of firms and considers the 'license to operate' or the normative position of transnational corporations. A correct understanding of the dynamics of internationalization of extractive industry TNCs requires an integrative approach of extrinsic as well as intrinsic motives. This article delineates the most important ingredients of such an approach.

1. Introduction: from intrinsic to extrinsic motives

The literature on the factors influencing the nature and degree of internationalization of transnational corporations (TNCs) from the extractive industries has been relatively modest and rather fragmented. Mainstream international business literature on the drivers of internationalization has primarily focused on the manufacturing and services industry and is not abundantly available for this sector. The extractive industries represent, firstly, a traditional case of (resource-based) internationalization. This has not stimulated much recent research due to the fact that most of the Western extractive industry firms started to internationalize long ago. Studying the entry motives of leading TNCs in these industries thus involves more historical than topical research.

Secondly, the extractive industries have always been a focal point for strong political controversy, which made studying them more the area of political economists than international business scholars – certainly after the international business community started to engage more in the study of the internal operations of TNCs (learning, affiliate autonomy and the like), further limiting attention for this branch. With the entry of a large number of extractive industries from developing countries (UNCTAD, 2006), there is growing controversy over access to natural resources as part of the growth models of both developed and developing countries; however, the internationalization patterns (and motives) of TNCs from the extractive industries are remerging as a prime research area (UNCTAD, 2007). An overview of the literature serves to give an appropriate framework of reference for the debate on methods, theories and levels of analysis. This is the aim of the present contribution. In short, this requires a shift in research from the recent emphasis on intrinsic motives to (also) include extrinsic motives.

Firms in the extractive industries have in common their high-risk nature and capital intensity as well as the strong dependency of their business on world markets (Jones, 2005). Four types of TNC motives to internationalize are usually distinguished: market-seeking, efficiency-seeking, resource-seeking, and (strategic) asset-seeking. These can also be referred to as the "intrinsic motives" for internationalization (cf. van Tulder with van der Zwart, 2006: 48ff).

Depending on the phase in the value chain, each of these motives prevails in the extractive industries. For raw materials supply (upstream) the resource-seeking motive dominates, considerably limiting companies' strategic manoeuvring room (Dunning and Narula, 2000; Nachum and Zaheer, 2005). Further down the value chain, internationalization of manufacturing and refining contains a resource-seeking component (e.g. the search for cheap labour), but efficiency-seeking investments do prevail in the attempt to exploit differences in factor endowments. Resource- and efficiency-seeking FDI can be subsumed under the term "vertical FDI" (Braconier et al., 2005). The supply and distribution of final products (downstream) are mainly led by market- and strategic asset-seeking motives ("horizontal FDI" in the sense of Braconier et al., 2005). Further, internationalization of parts of the value chain also depends on the type of resource, which has implications for e.g. transportability and pricing.[1] Finally, (strategic) asset-seeking FDI is

[1] Natural gas for example is considered more of a regional commodity (Foss, 2005), whereas for oil, due to its better transportability and consistent and global pricing in dollars (Gulen, 1999), a global market exists.

motivated by a desire to gain access to new reserves or markets, and – more often in the case of junior firms from developing countries – also to obtain access to firm-specific knowledge.

This article, firstly, reviews the three traditional intrinsic motives for internationalization that are most relevant for the extractive industries (section 2). But the paper will also consider what is known of so-called "extrinsic motives", the relationship with external stakeholders, in particular with governments. The famous saying of Yergin (1991), namely that oil is 90% politics and 10% oil, also holds for other extractive industries. The bargaining relationship with governments can therefore be understood as part of the traditional international business literature – albeit much less researched in the last two decades – and will be discussed in section 3. Finally, a new generation of "extrinsic" motives can be found in the upcoming influence of non-governmental organizations (NGOs). Section 4 briefly addresses to what extent NGO strategies – according to the literature – might have an impact on the international expansion and structure of the industry.

2. Traditional intrinsic motives: the international management perspective

Traditional intrinsic motives refer to the efficiency gains to be won from "being a TNC" through: internalizing markets across borders in a global economy characterized by considerable market failures; exploring the resources where they are located and transferring them elsewhere; coordinating asset-specific advantages of particular locations that are normally unrelated; and gaining in efficiency through the integration of closed markets around the world, such as labour markets. In the OLI (Ownership, Location and Internalization) approach of Dunning (1993), the motives primarily belong to so-called "locational advantages", whilst empirical research at the level of the company adopted an international management perspective.

a. Resource-seeking

The resource-seeking motive in the extractive industries is mainly represented by the worldwide search for cheap natural resources. Resource-seeking is the traditional motive for internationalization that is also most easily fitted into a neoclassical (comparative advantage) welfare-maximizing framework. For resource-seeking firms, two options exist to access raw materials: (1) spot purchases and/or long-term contracts; or (2) internalization of production (Jones, 2005; Ollinger, 1994). In the OLI paradigm, TNCs are considered to gain an

advantage through internalization and therefore try to avoid external market transactions and the uncertainties of operating in the free market (e.g. Dunning, 2000).

From a transaction cost point of view, firms in the extractive industries have on average more reason to try to circumvent the inadequacies of the international market via vertical integration (Williamson, 1990). Asset specificity, information asymmetry (e.g. about the quality of the raw materials), uncertain conditions (quality, amount of the resources available, and geopolitical changes), and the frequency of transactions determine the choice between these options (Caves, 1971; Hennart, 2000; Jones, 2005; Williamson, 1990). Asset specificity is of obvious and prime importance in most of the extractive industries.[2] Vertical integration reduces those transaction costs and ensures self-sufficiency and independence from raw material suppliers (Morse, 1999; Vernon, 1971). Once they are vertically integrated, firms are "bound" to their raw material sources and continuously need to secure access to cheap sources in order to be able to compete on price, leading to further internationalization (Vernon, 1971).

It was found for the oil industry that vertical (upward) integration into the refining industry can be associated with considerable benefits, but also with high organizational costs (Al-Obaidan et al., 1993). Accordingly, factors other than the transaction benefits must exist that justify the high number of vertically integrated TNCs in the extractive industries. For example, strategic objectives might contribute to our understanding of why firms vertically integrate (Jacobides and Billinger, 2006).

Ownership advantage in State-owned enterprises (SOEs) in the oil industry is mainly based on their control over national resources, whereas private companies' ownership advantages are derived from their ability to gain access to and control over resource reserves and finance all over the world plus their superior abilities in coordinating the international value chain. Furthermore, they often possess the technologies to extract resources economically even from reserves that were deemed too costly only a few decades ago. A brief look at the share of upstream versus downstream activities of the State versus private oil majors supports this view: SOEs dominate in the upstream

[2] In the oil or aluminium industry for example, switching costs are extremely high because refineries and production plants are built according to the specifications of the raw material available and therefore constant supply needs to be ensured (Al-Obaidan and Scully, 1993; Stuckey, 1983).

business (in 2001 with 42% of all known oil reserves and 25% of world oil production in the hands of Saudi Aramco, Petroleos de Venezuela, Iran's NIOC and Mexico's Pemex), whereas private TNCs prevail in the downstream sector (Energy Intelligence Group, 2003). A recent report even argues that less than 10% of the world's known oil and gas reserves is controlled by Western international oil companies, with the share of resources controlled by national oil companies (NOCs) at 77% and still rising (James A. Baker III Institute for Public Policy, 2007). However, SOEs are increasingly changing from being "resource-holders" into active resource-seekers, as evident, for example, in CNPC's (China) push forward to secure international oil reserves (Hoyos, 2007), thus posing a new threat to established international oil companies and their resource-seeking strategies.[3]

b. Efficiency-seeking

Efficiency-seeking FDI in the extractive industries is mainly undertaken in the refining and manufacturing stages of the value chain, where economies of scale are essential and TNCs try to exploit differences in factor endowments of countries by spreading their value chain internationally.

Locational determinants vary throughout the steps in the value chain. For production, it is the geological potential, quality, accessibility and risks associated with production of the resource (which may include reputation risks and costs caused when projects have to be abandoned due to political instability or conflicts). Refining requires other locational factors. Here, the costs of transportation and distribution, i.e. access to markets and maximizing the scale of production, have to be balanced against each other (Tavares et al., 2006). In addition, access to the resources needed in the refining process plays a major role. For example, in the aluminium industry, cheap energy is highly valuable, and locations that offer opportunities for energy generation (e.g. rivers) are preferred for refining plants. The need for cheap energy is also a source of horizontal integration into the energy business in this industry (Stuckey, 1983; Whiteway, 1996).[4]

[3] The announcements that China's biggest coal producer, Shenhua, intends to diversify into mining of other mineral resources and acquire more assets abroad shows that this tendency is also present in the mining sector, where it is even easier for SOEs to invest in foreign assets and buy up foreign companies because negotiations are less politicized (Oster, 2007).

[4] The role of a steady power supply for investment decisions has also been noted for other industries (Morphy, 2005) and underscores the importance of infrastructure provision in developing countries wishing to attract foreign investors.

Recently, the "classic" variables that determine the location of resource-seeking TNCs' foreign activities (availability, price and quality of the natural resource; infrastructure; and governmental factors) have been complemented by the availability of local opportunities to upgrade the resource and the chance to collaborate with local firms in knowledge- and/or capital-intensive exploitation (Beamish et al., 2003). Thus, more importance is attached to factors that are less based in the comparative advantage of the respective country but more grounded in the creation of competitive advantage, especially in industry clusters (Porter, 1998). This growing importance of so-called created assets in the last decades (e.g. Dunning and Narula, 1996) renders investments abroad more selective, especially those that do not directly depend on the presence of a natural resource.

However, most developing countries targeted by resource-seeking firms are usually in the early stages of their investment development path. They have not much to offer to the investing firm other than their natural resources and are therefore less likely to benefit from the presence of foreign firms that are likely to undertake efficiency-seeking investments elsewhere (Dunning et al., 2000). Here, Government policy is especially important. Industrial or regional policies, together with the foundation of relevant institutions, can trigger the development of related and supporting industries. In this case, the TNC presence helps upgrade locational advantages that can also help in the future to attract more beneficial forms of FDI (Dunning and Narula, 1997; Dunning et al., 2000).

c. Strategic asset-seeking

International business literature on the strategic asset-seeking behaviour of extractive industries is scarce as well – certainly when investment in developing countries is considered. High initial investments to set up operations in the extractive industries create a need for large economies of scale (Vernon, 1971) which in turn has resulted in an oligopolistic industry structure. Under oligopolistic conditions, firms are likely to enter foreign markets strategically in order to erect entry barriers or curb competitors' benefits in their home market or foreign locations (Caves, 1971; Vernon, 1971). The importance of longer-term contracts in the extractive industries, combined with the fact that these contracts often contain exclusivity rights for particular resources, makes the resource a (strategic) asset as well. In terms of entry strategies, in the extractive industries there exist clear "first-mover" (locational)

advantages (Frynas, 2000; Stuckey, 1983). Furthermore, firms merge with local firms or acquire them in order to gain access to their strategic position in the market and national resource reserves. For example, the merger of Exxon with Mobil enhanced the position of the newly formed company in Asia (Gilley, 1998).

Strategic asset-seeking in the sense of acquiring knowledge internationally is of particular importance for the latest generation of extractive TNCs from developing nations. Given the limited availability of technical know-how in their home countries, resource-seeking TNCs from newly industrializing countries such as India and China (see UNCTAD, 2006) are likely to also engage in high levels of strategic asset-seeking FDI, thereby aiming to accelerate their development into transnational players via the acquisition of technology and know-how instead of own development (Dunning et al., 1996). Cross-border mergers and acquisitions (M&As) of upstream extractive corporations make up the bulk of FDI, especially to developing countries (Brakman et al., 2006). Waves of M&As occurred in oil and gas (e.g. ExxonMobil, ConocoPhillips, BP Amoco) as well as in the mining industry (BHP Billiton, Rio Tinto). M&As are often faster and cheaper than building up foreign assets through greenfield investments and are therefore chosen by companies aiming for rapid expansion of their international operations (OECD, 2001; Oster, 2007). Likewise, M&As serve strategic political objectives, especially in the oil industry, i.e. when SOEs bid on foreign firms in order to secure future oil supply (Gardiner, 2006; Zweig and Bi, 2005).[5]

Two different perspectives on cross-border M&As can be distinguished. The first sees acquisitions as a way for firms to spread and make use of their competitive (ownership) advantages, whereas more recently, a second view has been developed emphasizing a "pull" from the host country location triggering M&As (Anand et al., 2005). There is most likely interplay between the competitive advantages of the acquiring firm and the local assets possessed by the acquired firm in the host country. The ability to successfully engage in knowledge diffusion between the two firms (internalization) then determines the success of the M&A transaction (Anand et al., 2005).

[5] A recent report for the upstream oil business showed that national oil companies (NOCs) are playing an increasingly important role in the competition with international oil companies as major buyers of assets (John S. Herold Inc., 2006).

3. Traditional extrinsic motives: the international political economy perspective

The location-specific advantages of the host country are of no use to firms as long as they are not granted authorization by host governments to explore them. Natural resource laws and policies in the host country create a more or less favourable frame for FDI that influences the interaction of ownership advantages with location advantages (e.g. when local firms are favoured with beneficial regulations or countries introduce tax benefits and the like to attract foreign investors). Traditional theories of FDI largely neglect the influence politics can have on the actual value of a reserve (including political factors, as compared to the pure value the reserve might have) to a foreign investor (Etemad and Salmasi, 2003b).

Mineral policies reflect Government interests and are mainly influenced by the importance of the investment and industry for the national economy (Moline, 2001). Government involvement and power (bargaining) relationships are of special importance in the extractive industries, with oil being the most politicized natural resource of all due to its central role for the world economy (Morse, 1999). Most resource-rich countries (developed and developing alike) rely heavily on exports of oil and other natural resources to keep their economies running. Consequently, governments are highly sensitive to foreign control over these resources (Ghemawat, 2001; Penrose, 1968). The increasing use of production-sharing agreements instead of concessions in the oil and gas industry supports the notion that governments want to be involved as far as possible in the management of their resources (Pongsiri, 2004). The degree of internationalization in the extractive industries is therefore influenced by the sources of bargaining power of (1) governments, (2) TNCs and (3) the degree to which these sources change over time. This section discusses the application of the classical obsolescing bargain model of Vernon (1971) to the extractive industries and considers in which direction it has been updated and extended.

a. Government bargaining power

In her less well-known work on the international petroleum industry, Edith Penrose – already in the 1960s – argued that the bargaining power of host governments in relation to resource-seeking TNCs depends heavily on the relevance of operations in the respective country for the firm and the presence of alternative locations for resource exploitation (Penrose, 1968). Legislation and the threat of nationalization are sources

of host country government bargaining power, which is further enhanced if the TNC operates in a competitive industry (Fagre and Wells, 1982). General economic conditions and world market commodity prices affect the distribution of bargaining power between firms and governments and are reflected in legislation and contracts (Etemad and Salmasi, 2003a).

Extractive industry legislation is one way for governments to ensure that they receive a share of the benefits generated by resource exploitation, e.g. in the form of taxes paid on raw products traded within the firm (Makhija, 1993; Penrose, 1968). There are pronounced quality differences in countries' legal frameworks regarding natural resource extraction (Bougrine, 2006; Kimel'man and Andriushin, 2005), confronting TNCs with a "jurisdictional asymmetry" (Jones, 2005, p. 201). In less developed host countries, legal systems are often developed "on the go", as Government officials gain more experience with the resource industry.[6] This adds another dimension of complexity and uncertainty for the TNC manager and another source of transaction costs (Meyer, 2001).

Regulatory differences between countries strongly influence decision-making on foreign investments. It has been shown that, besides the overall profitability of a project and the mineral potential of the country, a favourable fiscal regime is the third decisive factor for the direction of FDI (Etemad et al., 2003b). This provokes "regulatory bargaining" between host governments and firms (Reed, 2002) and might end in a race to the bottom when governments try to compete for FDI (van Tulder and van der Zwart, 2006).[7]

The threat of nationalization of foreign firms' assets has been considered one of the major risk factors in the natural resource industry after the wave of expropriations of the 1960s and 1970s in the oil industry of the Middle East (Bradley, 1977). At the same time, nationalization in the mining sector took place in South America (Bolivia, Chile) and

[6] For examples of the development of the Kazakh and Russian petroleum legislation, see Brothers, 1997; Lynch-Bell, 1994.

[7] The mineral development agreement between the Government of Liberia and Mittal Steel (now ArcelorMittal) is a good example of how TNCs use their bargaining power to negotiate beneficial conditions for their operations. Amongst other things, the agreement forbids the application of newly introduced laws to the company and its operations, frees Mittal from tax obligations for at least five years, puts corporate land interests and rights above those of local communities, and transfers important public infrastructure into company ownership (Global Witness, 2006). The Liberian Government's manoeuvring room to influence corporate conduct is severely restricted by the agreement and conflicts can be anticipated. It seems unlikely that developed country governments would accept equal conditions.

Africa (Zaire, Ghana, Guyana, Zaire), affecting negatively the levels of FDI in the sector (Etemad et al., 2003a; Hilson and Yakovleva, 2007). Nationalizations at the time were driven by the wish to break free from colonial ties and to gain control over strategically important resources (Jones, 2005). Advances in administrative skills in the resource-rich countries and the availability of operational knowledge on the market were the enablers, making the creation of State-owned enterprises in the extractive industries possible (Makhija, 1993; Vernon, 1971). However, the need for capital, latest technology and innovations, and the lack of experience in managing the (considerable) market risks made some governments open up again to foreign investment after the first enthusiasm faded (Morse, 1999). In addition, efforts to copy the strategies of the leading TNCs by integrating downstream (vertical integration) into developed market economies turned out to be extremely costly for the nationalized TNCs from resource-rich countries.

Nationalization basically breaks up the vertical integration between upstream and downstream operations where inputs and outputs can be balanced within the firm (Morse, 1999). Industries differ in their risk profile for expropriations depending on the bargaining power of actors, which in turn is largely determined by the possibilities for substitution and the number of competing sources. For example, the aluminium industry is less prone to nationalization than the copper industry. Bauxite – the main aluminium ore – can be found in a range of locations, whereas high-quality copper reserves are located in only a very few select places which provides the governments with much greater bargaining power (Vernon, 1971). Oil is found in a large number of locations, but the biggest and easiest to extract reserves are nevertheless concentrated in a few countries. This, combined with its high strategic relevance for the world economy, made it a prime target for nationalizations (and counter-nationalizations). Governments follow different objectives across industries (Makhija, 1993).

Has the risk of nationalization lost its relevance for bargaining relationships in extractive industries? Current events in South America (e.g. Bolivia and Ecuador nationalizing their hydrocarbon industries in 2006) show that the risk of expropriation is not a hypothetical one. Also in Venezuela, foreign oil and gas operators had to hand over their projects to the local PDVSA without knowledge about potential compensation by the Government (Hays, 2007). With all production already nationalized, in May 2009 the Venezuelan Congress passed a new law that further extended the influence of the Government to all activities related to the petroleum industry, resulting in nationalization of oil service companies. Also in Nigeria, the Government plans to

restructure its national oil industry and award more oil and gas blocks to the new National Petroleum Corporation of Nigeria (replacing the current NNPC) (Izundu, 2007).

These examples point clearly to a general trend of developing country governments aiming to reduce foreign control in their extractive industries. The argument that expropriations often occur in "waves" when neighbouring countries copy the behaviour that proved successful in another country (Bradley, 1977) underscores the importance for managers to be (still) aware of that risk. Although advocated frequently, joint ventures with the local government or indigenous firms are not a magic bullet against expropriation (Bradley, 1977). Besides losing assets through direct expropriation, there is also the possibility of "creeping expropriation", when the Government introduces measures (tariffs, regulations etc.) that ultimately make doing business in the respective country impossible for the corporation (Moline, 2001). The fear of losing assets through expropriation – even in case this event does not occur – impacts firm behaviour: it leads to strong exploitation of existing deposits but inhibits the firm's desire to explore new reserves (where chances are high that they will be lost in the near future). This strategy can have a negative economic impact on the host economy, because high levels of production often reduce the total amount of resources that can be extracted from a reserve (Peterson, 1976).

In the oil industry, the power balance has now clearly shifted towards the SOEs of countries such as Saudi Arabia, Venezuela, China, the Islamic Republic of Iran, and the Russian Federation and seems unlikely to change in the future (Hoyos, 2007; Vikas and Essworth, 2007). However, most governments that own their national petroleum industry fail to reinvest enough money in the industry to maintain its competitiveness in the long run. As a result, the role of international oil firms might change into one where they partner up with the national oil companies, bringing their technical expertise and managerial skills to the bargain (Hoyos, 2007). There is little literature on the nationalization of mining ventures, which is an indicator for the lower political relevance of the mining industry for state governments (and also the fact that there are more local mining firms operating in the respective countries).

b. An obsolescing bargain over time?

Extractive industry TNCs derive bargaining power primarily from their technological capabilities (Fagre et al., 1982; Pongsiri, 2004) and their control over the international value chain. Host countries often do not have access to the newest technology possessed by foreign

TNCs with their large R&D expenditures. Constant progress in the development of production technology enables TNCs to produce and refine natural resources more efficiently, reducing the bargaining power of countries that rely on the cheap availability of their resources even further (Morse, 1999). Additionally, TNCs are often supported in their international ventures by their home governments (Bougrine, 2006).[8] Bilateral investment treaties (BITs) and their clauses on the protection and promotion of FDI are a way for home country governments to try to reduce the political risk for their TNCs associated with operating in (developing) foreign countries (Fortanier and van Tulder, 2007). However, with scarce resources justifying even entry into unstable countries, BITs are more important for attracting non-resource-seeking FDI, e.g. refining and manufacturing. It has been argued that the increased use of BITs reduces the bargaining power of host governments because they do not gain an advantage over other countries (that can also negotiate a BIT) but are bound to the clauses of the treaty in relation to the incoming firms (Fortanier et al., 2007).

The obsolescing bargain model suggested that with time and increasing resource commitment into fixed assets, bargaining power shifts from the hands of the multinational managers into the hands of the host country government officials, leading to an obsolescing bargain that is likely to be renegotiated at the initiative of the host government (Vernon, 1971). The model is based on the assumption of high sunk costs that are present in the extractive industries that are characterized by (a) asset specificity of the investments, (b) transaction costs, (c) remoteness of the reserves, and (d) price-cost instability (Barham et al., 1998). High investments weaken the stance of the foreign firm towards the local authorities. Likewise, Government perception of the fairness of rent distribution changes over time towards a perceived unfairness of the distribution of resource rents that does not consider the risk and high initial investments associated with resource exploration (Vernon, 1971).

Additionally, after the initial phase in the bargaining process, the host country government becomes less dependent on the TNC when infrastructure is built and returns from resource exploration flow in and contribute to development (Penrose, 1968; Vernon, 1971). Furthermore, political calculus and the wish to distance the Government from the TNC in the sense of showing Government independence from foreign firms may reduce the appreciation of TNC presence in the country (Vernon,

[8] This factor has been incorporated in more recent elaborations of Vernon's original bargaining model (see Ramamurti, 2001 below).

1971). Because of the high political and strategic relevance of oil, the effects of the obsolescing bargain model are most pronounced in the oil industry rather than in mining. More recent studies have revealed a positive long-term influence of technology intensity of the venture and size of the investment undertaken by the TNC on the long-term stability of the bargain (Vachani, 1995).

However, the obsolescing bargain model has been criticized for overestimating the power of local governments to dictate policy and for underestimating the ability of TNCs to put pressure on governments in response (Jenkins, 1986). Firstly, even for a developed-country Government (such as that of Canada), there seem to be notable obstacles to the realization of actions inhibiting TNC conduct (ibid.). A two-tier bargaining model extending the work of Vernon to incorporate bargaining between national governments and/or financial institutions and the host country (e.g. the formation of bilateral agreements, imposing of liberalization by the IMF) that precedes and shapes the conditions for the actual bargaining process between the individual TNC and host government has been proposed by Ramamurti (2001). He concludes that as a result of the tier-one negotiations, the position of host governments in the tier-two direct negotiations with TNCs has been weakened.

Secondly, the role of international organizations and the influence of globalization have been underrated in the original obsolescing bargaining model. Market liberalization requirements in particular imposed on developing countries by the Bretton Woods institutions have increased the competition between developing countries to encourage FDI as part of their economic development plans (Portelli, 2004). Eden (2004) argues that the desire of host governments to attract FDI, combined with more cooperative relations between governments and TNCs (Dunning, 1993; Luo, 2001), makes the model less applicable today. Thirdly, organizational legitimacy or the wish to create and maintain corporate reputation (or credibility) has become an increasingly important variable that is not accounted for in the original obsolescing bargain model (Eden et al., 2004). Legitimacy, the extent to which the organization is accepted by its environment (Kostova and Zaheer, 1999), has the potential to enhance the TNCs' bargaining position and to prevent the bargain from becoming obsolete (Eden et al., 2004).

4. Modern extrinsic factors: the role of NGOs

In the past, the horizontal integration or diversification of oil companies into completely unrelated industries such as computers

boomed in the 1970s and was mainly part of a market-seeking strategy (spreading risks and investing in anti-cyclical industries; cf. van Tulder and Junne, 1988). These strategies often proved unsuccessful and forced companies to refocus due to a lack of internal resources (Ollinger, 1994). The experience also shows the relatively high "exit barriers" that exist in oligopolistic industries. More recently, European oil TNCs in particular have started to diversify into more related industries, such as the renewable energy sector. This move can be interpreted as safeguarding future markets, but has also been influenced by the growing pressure by critical NGOs to become more "sustainable" and position themselves as good corporate citizens (Frynas, 2003).

The sustained oligopolistic nature of most extractive industries has made many leading Western firms prone to become "icons" or "worst-practice" cases for critical NGOs, in particular in their home markets. De Beers became an icon for the "blood diamonds" campaign; Shell for the environmental (Brent Spar) and human rights movement (Nigeria); Rio Tinto (mining) for the environmental movement and the indigenous peoples movement (in Papua New Guinea); or Total and other resource firms for human rights organizations owing to their involvement in Myanmar.

International NGOs represent a relatively new force influencing the internationalization of firms but are of great importance in the extractive industries where especially upstream operations abroad – and in developing countries – are subject to close public scrutiny (MMSD, 2002). Extractive industry firms often have a considerable impact on the social and physical environment in which they operate in making legitimacy, gaining a "license to operate", and avoiding negative labels such as "enemies of the country" (Zinkin, 2004, p. 69) preconditions for successful operations. For the individual firm, lack of legitimacy can be an entry barrier but is also important once the market has been entered (Kostova et al., 1999). Engaging in corporate social responsibility (CSR) and entering local partnerships are ways for TNCs to enhance their organizational legitimacy in order to strengthen their bargaining power (Eden et al., 2004).

So far, the role of NGOs as important actors in the bargaining process between TNCs and host governments has only received scant attention in models of the bargaining process (Ramamurti, 2001), especially with respect to the resource-extracting industries. However, the increasing importance of NGOs as players in the political debate has been widely recognized (Kobrin, 2005; Ramamurti, 2004; Rugman

and Verbeke, 1998; Teegen et al., 2004). Due to the reduced ability of governments to define and act on their own national economic policies, transnational NGOs have become important players in helping them shape these policies (Smith, 2005). Owing to the lack of success of traditional government strategies that were beneficial for foreign TNCs and some host country governments, mineral policies in developing countries recently changed to also incorporate the interests of groups other than the Government (e.g. local communities, artisanal and small-scale miners, environmentalists) (Mtegha et al., 2006). National and transnational NGOs often support such groups and are increasingly gaining bargaining positions as third party players that are able to aid host governments but also work with TNCs wishing to improve their track record.

Recently, the relative "distance" between home and host country's CSR regimes has been identified as a factor influencing both the internationalization and the CSR strategies of TNCs (van Tulder with van der Zwart, 2006, chapter 13). It is proposed in this framework that cultural distance as a factor affecting the bargaining relationships with societal stakeholders in the home and host context should be complemented by "institutional distance" and "development distance". Translated to the extractive industries, this implies that the higher the involvement of developed-country TNCs in developing countries that are unstable due to low-quality governance (boiling down to a high institutional and development distance), the higher the risk of reputational damage in the home market. There seems to be a risk that international oil companies with an increasing need to obey certain rules of conduct in developing countries are disadvantaged when competing with State-owned firms from developing or newly industrialized countries (NICs).

A recent example is the huge investment of the Chinese CNPC in Sudan's oil industry when concerns about human rights issues made international oil companies reluctant to invest (Hoyos, 2007). The foreign investment policies of – especially Chinese and Indian – SOEs have "[…] complicated international efforts to create a more effective architecture to address rights crises, conflict management over energy resources and environmental stewardship" (James Baker III Institute, 2007, p. 16). It is obvious that international efforts to marginalize countries as a result of their human rights abuses are losing their force when firms from countries that are aggressively pushing to secure new resource reserves invest despite those issues (Zweig et al., 2005). With its investments in Myanmar and Sudan, for example China "[…] is challenging the United States' moral hegemony and its ability to check states whose records it abhors" (Zweig et al., 2005, p. 5).

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Capturing a fair share of fiscal benefits in the extractive industry

Bryan Land *

For many Governments, their expectations of reaping a fair share of the high returns to the extractive industry over the last few years are not yet being realized. In light of likely continued good returns to the industry, at least in the medium-term, it is important for Governments to set up suitable arrangements, particularly in the fiscal arena. In order for them to do so, a number of conditions need to be met. First, there has to be an appreciation of the characteristics of the extractive industry and the Government's bargaining strength. Secondly, there must be fiscal policy coherence between Government institutions to underpin suitable fiscal arrangements. Thirdly, it is necessary to ensure the availability of skills necessary to formulate fiscal policies and appropriate negotiating strategies. A final requirement for countries and Governments is the capacity to administer and enforce more sophisticated forms of taxation and contractual arrangements.

1. Introduction

There has been a striking reversal of fortunes in recent years for those companies that make a business out of finding and exploiting mineral and hydrocarbon resources. High commodity prices, in real as well as absolute terms, have translated into sharply increased earnings. Although this has led to a welcome increase in investment levels, many companies are nonetheless generating so much cash that levels of gearing have reached new lows and cash is being returned to shareholders through special dividends and share buy-back programmes.

In such favourable times, all stakeholders, not only shareholders, expect a fair share of the resulting economic benefits. For many governments, this expectation is not being realized. This will be evident from the widespread resort to unilateral actions by governments to redefine the fiscal terms under which investment in the extractive industry takes place.

* The views expressed in this study are those of the author and do not necessarily reflect the views of the United Nations, its member States, or the institutions to which the author is affiliated.

The case of mining in Zambia is illustrative. The fiscal regime under which the Government succeeded in attracting investors from the mid-1990s to rehabilitate the ailing mining sector offered substantial incentives, including tax holidays and one of the lowest rates of royalty in the world. The annual budget announced in February 2007 increased mining royalties and tax rates and curtailed the provision of tax holidays.[1] These changes were to apply only to new investments, since the Government had entered into contractual stability undertakings with mining companies in much less auspicious times. The Government has let it be known, however, that it hopes to claw back some of the concessions previously granted in direct talks with these mining companies.

Other cases have been rather more acrimonious. In Mongolia, prospects for a surge of investment in minerals were dampened when, in May 2006, the Government decided to impose a windfall tax on gold and copper mining revenues, just as several significant projects were being assessed for full commercial development.[2] The resort to new windfall taxes linked to oil price levels in Algeria and China, which have been applied to existing as well as new oil projects, is prompting companies to turn to international arbitration in order to protect their contractual position and obtain compensation.[3] Venezuela, as well as Bolivia and Ecuador, have taken the even more radical step of entirely rewriting the rules on equity participation and taxation to reduce foreign oil company interests and add to their tax bills – moves that constitute "creeping expropriation".[4]

[1] The February 2007 budget contains a number of tax measures to redress the perceived inequity in the fiscal terms available to investors in the Zambian mining sector. This includes an increase in the rate of ad valorem mineral royalties from 0.6% to 3%, a rise in the applicable rate of income tax from 25% to 30%, application of a 15% dividend withholding tax on previously exempt mining profit distributions, and the curtailment of income tax holidays previously offered to attract investors (PWC 2007). Fiscal stability undertakings formed a key ingredient in the fiscal packages offered to the private sector to induce investment at a time of poor and uncertain copper market conditions.

[2] The Mongolian windfall tax took the form of a 68% levy on profits triggered by prices of gold exceeding US$ 500/ounce and copper exceeding US$ 1.18/pound (World Bank 2006). The Government has reportedly shown willingness to entertain negotiations with project sponsors who would otherwise be affected negatively by the increased tax burden.

[3] In March 2006, China imposed a special upstream tax levy on oil companies at rates of between 20% and 40%, linked to oil prices in excess of $40/barrel of oil, prompting ConocoPhillips to invoke the international arbitration clause in its production-sharing agreement (MarketWatch.com 2007). In December 2006, Algeria promulgated regulations imposing a windfall tax on production values exceeding US$30/barrel of oil, prompting Anadarko to make a charge against profits pending the outcome of negotiations or international arbitration (BusinessWire.com 2007).

[4] In February 2007, the Government of Venezuela announced a draft bill that

The consequences of such unilateral action by governments to capture a "fairer" share of the fiscal benefits generated by the extractive industry depend on many factors. Confronted by such Government actions, companies with investment costs already sunk must decide how to respond based on their financial and strategic interests. Some companies will accept that in order to retain an interest in lucrative assets, concessions have to be accepted, and will go to the negotiating table to seek a settlement. Others may opt to uphold their interests by challenging unilateral actions using legal remedies, such as international arbitration, to obtain economic compensation[5], while still others will determine that the best course of action is to pull out altogether.

The consequences of unilateral action by governments for those companies that may have been considering new opportunities to invest in such countries or to commercialize prospects that have been explored are potentially more significant. Such investors may be deterred from investing by higher levels of tax and heightened uncertainty about the fiscal "rules of the game". Governments that resort to unilateral action with a view to redressing perceived inequities in the sharing of the fiscal benefits of the extractive industry run the risk of setting back investment prospects for many years.

In this game of brinkmanship, the stakes are high. Though there are some governments that will win, there are others that stand to lose. What may come as a surprise to many is that governments and investors have not found ways to reconcile their economic differences in a more orderly and predictable manner. After all, the volatile character of mineral and hydrocarbon product prices is not a new phenomenon; nor is the potential for particularly rich mineral and hydrocarbon deposits to generate substantial resource rents (box 1). From time immemorial, public policymakers have been faced with the challenge of how to reap a fair share of the fiscal benefits that accrue from the exploitation of mineral and hydrocarbon resources in both good times and bad in a way that does not undermine the stability of investment and hence the sustainability of extractive industry development.[6]

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would increase the State's stake in four Orinoco heavy oil projects from the previous levels of 30-49% to 60%, thereby effecting State control of such operations (FT.com 2007).

[5] The reaction of companies operating under risk service contracts in Venezuela to a sharp increase in the applicable rate of tax on payments under such contracts has varied a great deal. Whereas some have opted to continue to operate and pay the tax, at least one, State-owned ENI of Italy, has opted to take Venezuela to international arbitration.

[6] Colbert, Louis XIV's Controller-General of Finance, made the acute observation that "the art of taxation consists in so plucking the goose as to obtain the largest amount

Box 1. Characteristics of the extractive industry

The extractive industry displays certain characteristics that distinguish it from other industries and can explain government and investor economic interests and behaviour. First, governments and investors alike face huge uncertainty about the economic outcomes of extractive industry investments, especially at the start of an exploration programme. Not only are outcomes uncertain but they are highly variable too. Some of the factors that contribute to this are:

- Geological risk: a high number of investments yield no economic return because exploration is unsuccessful – success rates in the extractive industry are very low.[a] Variable value of deposits – mineral and hydrocarbon deposits are heterogeneous, being characterized by substantial differences in quality and location which determine the economic value that can be yielded by their exploitation.[b] The resource rent associated with the quality of a resource is, in a system of privately held exclusive mineral rights, appropriated by the company that holds those rights, to the extent allowed by the fiscal system.
- Price volatility: mineral and hydrocarbon product prices are notoriously volatile and display marked cyclical movements – such price behaviour reflects the imperfect responses of supply and demand to price signals.c

Secondly, Government and investor uncertainty about economic outcomes is compounded by the long time frames over which their respective economic interests are at stake. The gestation period for many larger scale investments is substantial, commonly exceeding ten years if a full programme of exploration has had to be undertaken. The value that governments and investors place on an uncertain stream of revenue at a future date will depend, in part, on the time value of money placed by each on such revenue streams.[d]

Thirdly, the relationship between Government and investor economic interests is characterized by the concept of an "obsolescing bargain". Before any investment is made, the bargaining power of the investor is at its strongest – by the time the investor has sunk costs in establishing the viability of exploiting a mineral or hydrocarbon, his bargaining power is very much weaker.

Confronted by such factors, the economic interests and behaviour of governments and investors could be summarized as follows.

- A *Government* will seek some return on the exploitation of the non-renewable resources, the rights to which it has allocated to private parties, since such resources are not replaceable, and will otherwise seek to optimize revenues from their exploitation. It would rather fix (or indeed reopen) fiscal terms once an investor has sunk costs but has yet to generate any economic return on the investment, rather than commit itself to fiscal terms before the investment commitment is made when the full range of investment risks are faced. The Government may also use the fiscal system to achieve a host of other objectives

of feathers with the least amount of hissing".

besides revenue optimization, relating to value-added processing of minerals and hydrocarbons, environmental protection and broader economic and social development goals.

- An *investor* and, where relevant, his financiers, will seek to maximize the protection of the investment against downside risks, including accelerating the pay-back period for an investment, and seek to capture as much of any windfall as may be generated from a particular deposit, as compensation for the many unsuccessful investments he must make in order to assure a single successful investment.[e] He would rather fix fiscal terms as early as possible, when the Government is most in need of inducing investment, rather than wait until he has sunk costs but has yet to generate any economic return on the investment. Critically, the investor will wish to base his investment decision on fiscal terms that are clear and predictable and not subject to unilateral change, as the bargaining position moves in favour of the Government.[f]

2. Progressive taxation as an alternative to brinkmanship

Progressive taxation may be considered to provide an orderly and predictable alternative to brinkmanship as a means of reconciling the economic interests of governments and investors. Under an appropriately designed fiscal regime, it should be possible for the Government share of fiscal benefits to adjust to changes in economic circumstances. Under such a fiscal regime, the Government "take" would rise or fall to correspond to changes in the levels of profitability actually achieved by mining and petroleum projects.[7]

In principle, progressive taxation has the flexibility to induce investment in high-risk ventures yet still assure the Government a significant share of profits, if and when they occur. It is therefore well suited to take into account the uncertainties inherent in extractive industry investment. Moreover, by adjusting the respective shares of the Government and the investor on an automatic ex ante basis, the two parties obviate the need to revisit existing fiscal arrangement on an ex post basis, thereby removing the risk of disagreement, deadlock and mutual recrimination. This provides a more certain and risk-free environment in which to undertake investment. Other things being equal, investors will reduce the risk premium built into the return on

[7] The Government take refers to the percentage share of net profits that is claimed by the Government through the fiscal regime. It is measured over the project lifetime, thereby representing the aggregate share of the Government. The Government take would include the share of net profits that are channelled through a State-owned enterprise – to reflect this situation, particularly in the petroleum industry, reference is commonly made to State take.

investment required to induce investment, with the consequence that investments of more modest profit potential, that would otherwise be deterred, will be undertaken.

In economic theory, the optimal form of progressive taxation is one that is progressive with respect to resource rent. The objective of resource rent taxation is to tax only that portion of net investment proceeds as exceeds the minimum rate of return required by the investor to undertake an investment.[8] The imposition of tax on this basis should not, in principle, distort investment decisions, in so far as it does not alter the pre-tax merits of an investment.

There are, therefore, a number of benefits of progressive taxation, which can be especially relevant to the extractive industry. The following section examines some of the types of taxes that have been developed with this objective in mind.

3. An overview of progressive taxes

For purposes of this overview, a progressive tax is one that is structured to adjust the fiscal burden progressively, either directly or indirectly, with achieved profits on a predetermined basis. As this overview will show, there is a wide spectrum of fiscal instruments that purport to achieve this, though in practice many of these have limitations, which will be noted, as appropriate. The fiscal instruments take many forms, including taxes in the conventional sense of taxes on production, business revenues or profits, State equity participation and production-sharing, as employed in the petroleum industry. The following survey is by no means exhaustive but serves to highlight the main types of fiscal instrument that have been developed and some of the issues concerning their use.

a. Progressive profits taxes

Many taxes on profits have been devised in which tax is applied at escalating rates. In its simplest form, the tax rate increases with rises in taxable income, as is common in the taxation of personal incomes. Taxable income is then taxed at the applicable rate.[9] The limitation of

[8] Resource rent is the excess of the total value (gross proceeds) arising from the exploitation of a deposit over the sum of all costs of exploitation, including the rewards to all factors of production. The latter includes the minimum return on capital at which investment will take place.

[9] Typically the higher rate is applied on an incremental basis, i.e. only on that portion of taxable income that exceeds the specified threshold. There are cases in which

this type of tax is to determine a scale of escalating tax rates that does not merely discriminate between small and large companies.

In order to overcome this limitation, some profits taxes have been designed in which the thresholds at which higher tax rates are triggered are based on profit ratios rather than absolute levels of profit. One of the early negotiated arrangements of this kind was that used in Papua New Guinea for the Bougainville copper project.[10] A further adaptation of the same principle is to be found in the Variable Rate Income Taxes employed in the mining sector in South Africa, Botswana, Namibia and Uganda. In these cases, a profit-to-sales ratio is used to define the tax rate in a formula that also includes starting and top rates of tax.[11]

The principal characteristic of the examples of profits taxes cited so far is that the applicable tax rate depends on profit performance on an annual tax accounting basis. Other profits taxes have been designed in which the applicable tax rate depends on the profitability of an investment achieved on a cumulative basis.

For example, a number of profits taxes are designed such that the applicable tax rates rate is linked to rates of return achieved over the project life to that point. There may be one or more thresholds at which successively higher tax rates are applied. Several countries have employed this approach, in both the petroleum and mining sectors, usually by establishing a separate tax to supplement ordinary flat-rate income tax.[12] The advantage of this type of tax, is its ability, if appropriately designed, to target resource rent at a project level. In practice, it is rather easier to describe resource rent than to tax it, since this depends on being able to determine the minimum required rate of return of the investor (see box 2).

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the higher rate is applied to the whole of taxable income but this implies greater fiscal severity and is less common.

[10] Under the renegotiated Bougainville Mining Agreement, a higher profits tax rate applied in any year in which taxable profits exceeding a defined percentage of the capital base of the project.

[11] The formula used to derive the applicable tax rate in Botswana, for example, is 70-1500/x, where x (%) = taxable income/gross income subject to a minimum tax rate of 25%.

12 Prominent examples include the Petroleum Revenue Tax brought in by the United Kingdom Government in 1976 to capture a higher share of profits from North Sea oil and the Additional Profits Tax pioneered by Australia, Canada and Papua New Guinea in the 1970s and subsequently featured in the legislated mining regime in Ghana and in several negotiated mining and petroleum agreements at various times.

Box 2. The minimum required rate of return

The minimum return required by an investor to undertake an investment is not fixed but will vary in relation to the prevailing cost of capital and expectations about the financial outcome of exploiting different deposits. A compensatory return on capital consists of a basic return equivalent to the rate of interest on risk-free long-term borrowing plus whatever margin the investor considers necessary to compensate for the technical, commercial and political risks associated with investments.

In practice, it is difficult for a Government to anticipate just what minimum return an investor would find acceptable. In principle, the minimum return should be no higher than the returns of investors on comparable investments. However, since deposits are scarce and each is unique, it is hard to rely on finding such benchmarks. This is a particular concern for countries that lack a track record in mining and where exploration is at a grassroots stage. A connected issue for the Government is whether and, if so, how to allow for the risk of exploration failure in the minimum return. In high-risk areas, this might require a very high premium added to the basic return required by an investor.[a]

b. Price-based windfall taxes

The progressive profits taxes examined above are all based on the principle of directly measuring and then taxing profits. However, governments can rely instead on a simpler and indirect way of taxing profits, by employing a proxy for profitability to trigger higher tax rates of supplementary taxes. A typical example is a price-based windfall tax on profits, such as has been introduced in Algeria and China (see note 4). These are targeted at the windfall profits that are expected to flow from periods of unusually high prices. The limitation of this approach is that product prices alone do not determine the level of profitability achieved on an annual basis, not to mention on a cumulative basis. In certain circumstances, cost escalation may significantly erode the advantage that high prices bring.[13]

c. Sliding-scale royalties

There are also examples of royalties being structured on a progressive basis. Under this approach, royalty rates imposed on production escalate on the basis of a chosen threshold. Many of the characteristics of this type of royalty are the same as those of taxes

[13] Indeed, both the mining and petroleum sectors are affected by significant escalation of inputs into the industries, which has resulted in sharp rises in the capital costs of developing new mineral and hydrocarbon projects.

examined in the preceding section, except that the fiscal imposition is on revenues and not profits, unless the royalty is, in fact, structured as a net profits royalty.[14]

d. Carried interest participation

State equity participation can be structured in such a way as to operate as if it were a progressive tax. A carried equity option enables the Government to fund its share of the costs of the project in which it takes an interest out of net project earnings, without any liability for any shortfall in net earnings. The investor effectively provides an interest-bearing loan to the Government, secured against project profits. The Government bears little risk under this arrangement but the investor must tie up capital in carrying the Government. This participation operates like an additional profits tax, in which the equity interest is equivalent to the rate at which additional tax is levied and the rate of interest which the loan bears is equivalent to the rate of return threshold at which the additional tax is triggered.

e. Profit-oil sharing (under production-sharing contracts)

More than half of ventures involving international oil companies in the petroleum sector take place under production-sharing contracts (PSCs).[15] Under this type of contractual arrangement, the balance of

[14] Ghana, for example, has employed a sliding-scale mineral royalty in which the starting rate is 3% rising on a sliding scale once the net operating profit ratio exceeds 30%.

[15] There are a number of reasons why production-sharing contracts were first developed in the 1960s and 1970s as an alternative to conventional royalty/profits taxation that then prevailed and have since retained their popularity in the petroleum industry. Firstly, it is often convenient for the Government, normally through a State-owned enterprise, to receive petroleum in kind in place of tax. This is particularly so for crude oil, which may be refined domestically or exported either in government-to-government deals or through traders (which at the time helped to break the market power of the major private oil companies. Second, the arrangement in which the investor acts as a contractor to the State-owned enterprise was designed to retain national control of petroleum and project assets and provide nominal management control, which was considered necessary because of the strategic importance of energy supply. Third, during the 1960s and 1970s, production-sharing had the attraction of avoiding pricing disputes which arose in the computation of profits taxation at a time when pricing was very much less transparent than in later decades. Finally, production-sharing has proved to be a quite workable, as well as flexible, way of sharing benefits between the State and the investor to which the industry has adapted. Companies, in particular, have come to rely on this type of contractual arrangement as providing stability for fiscal terms tailored to specific projects through negotiation.

production which is not allocated to the recovery of project costs is divided between the investor and the Government according to an agreed formula. This may be a flat rate split or a sliding-scale split. Sliding scales used in such arrangements typically attempt to correlate the division of the production surplus ("profit oil") to the expected profitability of the project, as would a progressive tax.

Historically, many PSCs have used a sliding scale based on production volumes, so that as oil field production increases, so too does the Government share of profit oil. The reason for using this approach is that production volumes, in a project in which costs are largely fixed (rather than variable), will correlate quite closely with profitability. But the correlation is not exact. Economies of scale might well occur in oil fields; however, the variable element of costs is not negligible. To the extent that the variable component of costs increases as a function of production volumes, then the correlation of production volumes and profitability cannot be assumed.

Other formulations have included an oil price element or a cost indicator (one proxy for costs, for example, is the depth of water in which a project is located). Though some degree of correlation with profitability can be expected under such arrangements, the correlation is unlikely to be exact.

An increasing number of PSCs feature sliding scales that are instead based on direct measures of profitability. The most common are sliding scales based on a revenue-to-cost ratio ("R factor"). Others employ the project rate of return. This type of sliding scale is likely to result in a closer correlation between the division of profit oil between the Government and the investor and achieved profitability of the project than other types of formulation discussed above.

4. Limited use of progressive taxation

The foregoing overview demonstrates that there is no shortage of fiscal and quasi-fiscal instruments that can be used to achieve progressive taxation. Considerable ingenuity has been shown in developing such tools, and much economic analysis has been devoted to optimizing fiscal systems around the principles of progressive taxation.

That so many governments have felt bound in recent times to revisit fiscal terms and unilaterally seek to modify them in their own favour, attests to the fact that progressive taxation is either not widely practiced or, where it is employed, not effective in meeting its objectives.

Indeed, this observation is supported by studies of fiscal regimes in the extractive industry, which provide compelling evidence that relatively few fiscal regimes actually achieve the objectives for which progressive taxation is designed. Cross-country studies have repeatedly shown that a high proportion of fiscal regimes are either neutral or mildly regressive and that very few are clearly progressive. Thus, it is typical for the level of Government take to remain unchanged or to actually fall rather than rise as a function of profitability.[16] Progressive fiscal regimes are more prevalent in the petroleum sector than in the mining sector; however, they are still the exception rather than the norm.

One or two examples would help to illustrate this point. In the case of mining, the United Republic of Tanzania is a country in which the fiscal regime has been the subject of some concern that the Government has not been receiving a fair share of increasing mining profitability. The regime is a simple one combining a relatively low royalty rate of 3 per cent on net production values and a 30 per cent income tax coupled with special deductions for capital spending. Since there is no progressive element in the regime, there is no means of adjusting the Government take upwards. In times of rising profitability, the effective tax rate remains unchanged and the Government share of such profits therefore falls.[17] By comparison, Uganda employs a fiscal regime that comprises a royalty rate of 3 per cent on gross production values and a variable rate income tax with a starting rate of 25 per cent rising thereafter, in accordance with a formula linked to the ratio of taxable income to gross mining revenues. This means that beyond a certain profitability threshold the effective tax rate starts rising, thereby achieving a modest degree of progressivity.

In the petroleum sector, an example of a recently devised fiscal regime that is progressive is that of Timor-Leste. In this case, the regime comprises a royalty of 5 per cent of gross production values, income tax of 30 per cent on the oil company's taxable income generated by its share

[16] Such studies are based on cash flow modelling of the entire array of fiscal impositions on an investment in order to derive a measure of how the net proceeds of an investment over its lifetime are apportioned between the Government and the investor. The conclusion is drawn from a variety of studies conducted over the years with which the author is acquainted. Among those that are published are studies by Johnson (1994) on petroleum and Otto et al (2000) on mining. Other studies of this kind are regularly conducted by IHS Energy and Wood Mackenzie (on petroleum) and the Commonwealth Secretariat (both mining and petroleum).

[17] The effective tax rate refers to the portion of a single dollar that is taxed by combining the royalty and the income tax. This is less than the arithmetic addition of the two rates, since royalty payments are deductible expenses for income tax purposes.

of production under a production-sharing contract and a supplemental petroleum tax of 22.5 per cent, which applies when the oil company's after-tax return on a cumulative basis has exceeded 16.5 per cent.

5. Factors limiting the achievement of progressive taxation

The concluding part of this paper considers factors that might explain why relatively few fiscal regimes in the extractive industry are progressive, notwithstanding the benefits of progressive taxation and the availability of a wide array of progressive tax instruments.

a. Design of the fiscal regime

Economic analyses of fiscal regimes reveal that many that include a progressive tax or equivalent fiscal instrument are not necessarily progressive overall. The interaction of all the constituent elements of a fiscal regime may result in its progressive elements being more than offset by other elements of the regime.

The most common example of this results from the use of royalties. Royalties are an imposition on production, not profits, and constitute a regressive form of taxation. Although excessive reliance on royalties may lead to inefficient operations and the discouragement of investment, many governments prefer an assurance that some revenue can be raised, irrespective of profitability. Royalties have the advantage of being relatively easy to administer, and many governments continue to view royalties as being the cornerstone of resources taxation. In addition, there are an increasing number of cases in which all or part of royalty proceeds are earmarked for distribution to beneficiaries at local government or community level.

Some other examples of taxes that are regressive and that can have the effect of offsetting the impact of a progressive tax, when combined in the fiscal regime, are export taxes, production bonuses (in the petroleum industry) and State participation, where this is structured as a free allocation of equity. The foregoing suggests that careful and holistic consideration needs to be given to fiscal regime design if the intended objectives of progressive taxation are to be achieved.

b. Competitive pressure to offer fiscal incentives

One further explanation for the limited employment of progressive taxation may be the intensity of competition among governments to

attract investment, especially among countries with little or no proven mineral or hydrocarbon resources or an acute need for investment to rehabilitate the industry. Until the recent turnaround in the economic fortunes of the extractive industries, levels of investment in exploration were falling and many companies were consolidating their investments in only the most prospective and established areas. Efforts to attract investment inevitably tended to focus on lowering the fiscal burden on investors rather than on seeking ways to share economic surpluses which would have been viewed as unlikely in such difficult economic circumstances.

This factor would have been particularly influential in the mining sector, given the long trend of subdued mineral prices and low industry profits that was only broken recently.[18] In this period, minerals exploration spending was drying up globally and much of the developing world was off the radar screens of mining companies. The ideal way to attract investment was, therefore, to offer substantial fiscal incentives, generating a so-called "race to the bottom". Though not as severe, competition among countries with unproven petroleum potential and faced by high oil import bills had resulted, especially in the 1990s, in the framing of many "frontier" fiscal packages, featuring special investment incentives.

Cross-country comparisons, such as those cited earlier in the paper, do indicate that the level of Government take varies quite markedly from one country to another and indeed, where terms are subject to negotiation, from one contract to another within the same country. At any time, there are some countries which are in a far stronger position to assert tough fiscal terms than others.

Thus, for example, within the mining industry, levels of Government take have typically ranged from lows of some 25 per cent to highs of 65 per cent in certain cases, reflecting considerable differences in prospectivity and economic circumstances. The "race to the bottom", particularly in the 1990s, resulted in a preponderance of fiscal regimes being in the lower part of this range, prompting recent reactions in which some governments sought to impose corrective actions.

[18] Fierce competition in the mining industry had, for a long period, driven capacity costs (and eventually mineral prices) down. Producer countries have not been able to assert the same measure of influence over mine supply as OPEC has over oil supply. To remain competitive, new mine supplies have had to be brought on stream at progressively lower costs.

Levels of Government take in the petroleum industry, with its ability to generate substantially greater resource rents in the case of giant or super-giant oil fields, typically range from similar lows (as in mining) but especially among established oil producing countries reach as high as 70–90 per cent. Recent analysis by IHS Energy and Wood McKenzie has identified significant increases in levels of Government take in a number of countries, resulting from unilateral actions and the outcomes of fierce competitive bidding for oil prospects.

c. Capacity weaknesses

Further factors that might explain the limited adoption of progressive taxation are weaknesses in Government capacity in many developing countries, in three respects. One is a lack of capacity to negotiate effectively with international companies because of an absence of the necessary specialized skills, particularly those of fiscal modelling. This leads to a poor understanding of the options available to governments and of the implications of alternative sets of fiscal proposals.

An observation that can be made, based on experience of advising on negotiations in both the mining and petroleum industries, is that in the latter case, the capacity to negotiate might be greater because of the tendency for State-owned oil companies to engage in negotiations with international oil companies on behalf of the State. This is a reflection of the economic strength and the interests of such companies that enable them to sustain a cadre of trained personnel with skills that can be deployed effectively in negotiations. By comparison, sector ministries are often ill-equipped to contend with the challenges of contract negotiations.

Another weakness is in the capacity to administer and enforce taxation. This would tend to limit the Government's interest in depending on more sophisticated forms of taxation. This is especially true of taxes whose effective administration requires robust reporting and auditing, and where vigilance is needed to safeguard tax collection against tax avoidance measures, such as under-reporting of revenues and over-statement of costs.[19] Observation, based on experience of advising on fiscal regime design, suggests that there is a limited interest among tax revenue agencies in administering anything other than the standard types

[19] In administering progressive profits taxes, the Government faces the risk that taxpayers will seek to avoid triggering higher rates of tax by incurring costs that would not otherwise have been expended ("gold-plating"). The incentive to do so might arise when the marginal tax rate is sufficiently high to make inefficient expenditure worthwhile.

of corporate taxation, regardless of the merits of special taxes crafted to suit the extractive industries.

A further weakness is a lack of fiscal policy coherence in Government that enables investors to seek and obtain a range of concessions from different taxing authorities. This problem is more prevalent in the mining sector, especially in countries with no tradition of mining. Often, there is no clearly demarcated mining fiscal regime – other than royalty, the taxes to which a company may be subject may depend on an array of generally applicable and mutually inconsistent tax laws at national and sub-national level. This can provide the scope for investors to obtain tax holidays and other incentives by qualifying for pioneer or export industry status under general tax and investment legislation, in which Government objectives may relate to employment creation or enhancing exports through processing operations.[20] By comparison, it is rare to find a petroleum fiscal regime that lacks such clear definition. In this respect, the prevalence of PSCs, which is a clearly defined industry–specific fiscal arrangement, may help to achieve fiscal policy coherence that might otherwise be lacking.

d. Reliance on bargaining power

Finally, as will be evident from recent events, many governments place faith in their ability, if the need arises, to depend on unilateral action to redefine fiscal terms when economic circumstances change in their favour. The marked changes in bargaining power that can take place in the extractive industries enable some governments to extract concessions from companies whose investments are captive (i.e. sunk costs) or which have already recovered their initial capital outlays.

This approach obviates the need to use foresight in the design of the fiscal regime to take into account changes in economic circumstances. For those countries that have the benefit of possessing proven and high-value mineral and petroleum deposits, this may be a viable approach to capturing a fair share of fiscal benefits in the extractive industries. Policymakers in Caracas, for example, may indeed calculate that they hold the upper hand in bargaining with international oil companies, given

[20] It is not uncommon for mining companies to qualify for favourable tax treatment by making application to ministries other than that responsible for mining. Where there is a lack of fiscal policy coherence in Government, this may lead to "cherry-picking" by companies, resulting in fiscal terms for mining projects that are particularly favourable to companies.

current high oil prices and their market share of proven oil resources. Whether this position is sustainable remains to be seen.

6. Conclusion

For many countries, a resort to fiscal brinkmanship is a course of action full of dangers that can be avoided by making better use of progressive tax arrangements. To do so, however, a number of conditions must be met. These include:

- An appreciation of the characteristics of the extractive industry, the bargaining strength of the Government and the benefits of progressive taxation;
- Fiscal policy coherence among Government institutions to underpin suitable fiscal arrangements based on a holistic approach to fiscal regime design, which will limit the scope for cherry-picking by investors;
- The availability of skills necessary to formulate fiscal policies and, where negotiation takes place, to formulate appropriate negotiating strategies; and
- A capacity to administer and enforce more sophisticated forms of taxation and contractual arrangements.

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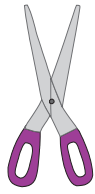

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