

Mining and poverty reduction: Transforming rhetoric into reality

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Abstract

This article critically evaluates the contribution that mining has made to poverty reduction, and assesses the prospects for better performance in the future. The article starts from the two assumptions that mineral resources are a potentially great source of wealth for poor countries, and that the various ill-effects associated with the “resource curse” are not inevitable. It then directs its attention toward the World Bank, a leading advocate of mining-led development and an institution with a core mandate to reduce poverty. Employing the World Bank’s own conceptualization of poverty as an analytical framework, the article demonstrates that mining has a dismal empirical track record to date in poverty reduction. While the theoretical reasons to believe that mining can contribute to poverty alleviation are perhaps sound, the reality of mineral-led development has not lived up to its rhetorical promise. The article elucidates problems with existing approaches and evaluates the World Bank’s recently concluded Extractive Industries Review as a dramatic new paradigm shift in thinking on mining and poverty reduction. It concludes that mining can positively contribute toward poverty alleviation, but only if a variety of demanding preconditions are met.

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1. Introduction

Intuitively, the idea that mining can positively contribute to economic development and poverty reduction makes sense. Lucrative natural resources, such as copper, diamonds, gold and tin, can provide poor countries with large revenue streams that can be used to alleviate poverty. However, the recent empirical record demonstrates that mining is more likely to lead to poverty exacerbation than it is to poverty reduction. A recent World Bank study distinguished three different types of mining countries – countries where mining is “dominant” (mining products contribute more than 50% of all exports), where mining is “critical”

(contributing between 15 and 50% of all exports) and where mining is “relevant” (6–15% of exports). Strikingly, it found that per capita gross domestic product (GDP) growth was negative for all three categories of mining countries from 1990 to 1999. Beyond this, growth rates were inversely associated with the level of dependence on mineral exports – countries with lower shares of mineral resource dependency had their economies shrink by less than countries with higher shares did. Specifically, the 18 countries where mining is “relevant” (6–15% of exports) had an annual GDP per capita growth rate of –0.7%. The 22 countries where mining is “critical” (15–50% of exports) had an annual GDP per capita growth rate of –1.1%, while the eight countries where mining is “dominant” had an annual GDP per capita growth rate of –2.3%. As that study explains, “... the

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growth performance of mining countries as a group seems indeed to suggest that countries with substantial incomes from mining performed less well than countries with less income from mining” [1, p. 7].

This article proceeds from two basic assumptions. First, it accepts the fact that mining is potentially a great source of wealth which could generate tremendous economic benefits for poor countries. Second, it accepts the fact that the so-called “resource curse” – the tendency of resource-rich countries to perform worse on a variety of social and economic measures than resource-poor countries [2–4] – is not inevitable. The experiences of Botswana (diamonds) and Chile (copper) clearly indicate that mineral-dependent development and sustained economic growth are not incompatible.

In explaining why mining’s actual track record on poverty reduction has generally failed to live up to its promising potential, this article directs much of its focus toward the World Bank – which, in the context of this paper, refers to any of the lending or insurance arms of the World Bank Group (WBG), including the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC), and the Multilateral Investment Guarantee Agency (MIGA). Such a focus is justified for a number of reasons. First, the World Bank’s core mandate is poverty alleviation. Second, the Bank has been a leading advocate of mineral-led development. Third, the Bank has a proven ability to influence the structure of economic policy and mining codes in poor countries and it also has the ability to exercise some influence over private-sector resource extraction firms who participate in Bank-sponsored projects. Finally, the recommendations of the WBG’s recently concluded Extractive Industries Review (EIR) signify a major paradigm shift in thinking on mining and poverty reduction.

The study is composed of three main parts. First, the World Bank’s own conceptualization of poverty is used to highlight the empirical failure of mineral-led development to contribute to poverty alleviation. Second, the theoretical rationale underlying the Bank’s continued support for mining is critically evaluated against the actual results achieved. Third, the recommendations of the EIR are evaluated to determine whether or not a new paradigm shift in thinking on mining and poverty reduction can contribute to better results.

2. Mining and poverty reduction: the poor empirical track record to date

2.1. The World Bank’s conceptualization of poverty

While some economists used to define poverty solely in terms of per capita GDP, the World Bank

now accepts that poverty has many dimensions. The Bank’s most in-depth recent statement on poverty, its 2000/2001 World Development Report entitled *Attacking Poverty*, identifies four broad categories that together encompass its conception of poverty. These categories are as follows: 1) material deprivation; 2) low levels of education and health; 3) vulnerability and exposure to risk; and 4) voicelessness and powerlessness [5, p. 15]. This conceptualization provides a sound framework from which to assess the mining sector’s empirical record on poverty alleviation.

2.2. Mining and material deprivation

The World Bank believes that economic growth contributes to poverty reduction. According to the WBG’s Mining Department, “Overall, economic growth *per se* is a well-documented prerequisite to sustainable development and poverty reduction” [1, p. 13]. Yet, in addition to the WBG study cited above, the academic literature lends overwhelming support to the negative effects that oil, gas and mineral dependence have on economic growth. Jeffrey Sachs and Andrew Warner have “documented a statistically significant, inverse, and robust association between natural resource intensity and growth over the past twenty years” [3, p. 15]. Thorvaldur Gylfason’s study of per capita economic growth from 1965 to 1998 and natural resource abundance, “suggests that an increase of about 10 percentage points in the natural capital share from one country to another is associated with a decrease in per capita growth by one percentage point per year on average” [6, pp. 848–849]. Additionally, Indra de Soysa’s results confirm “that mineral wealth has a strong negative effect on growth” [7, p. 124], while Carlos Leite and Jens Weidmann’s results “suggest that natural resource abundance tends to reduce long-run growth rates” [8, p. 25].

In terms of material deprivation, the Bank sees economic growth as necessary, but not sufficient for poverty reduction. The type of growth also substantively affects poverty reduction [5, pp. 45–48 and 52–55]. In this regard, extractive industries do not do well in terms of either equity of income distribution or creation of job opportunities for the poor. An empirical study by Michael Ross found that “mineral-dependent states have significantly higher levels of inequality than other states with similar incomes: the more that states rely on mineral exports, the smaller the share of income that accrues to the poorest twenty percent of the population” [9, p. 12]. The capital-intensive nature of many mining projects also means that they fail to provide “jobs that are accessible to the poor, who are generally unskilled or semi-skilled...” [9, p. 9].

2.3. Mining, health and education

The World Bank highlights the significance of pro-poor government spending on such things as education and health as an important element of poverty reduction [5, pp. 77–96]. Dependency on oil and/or mineral resources, however, also correlates with comparatively low spending on education. Thorvaldur Gylfason tests three different measures of education against natural resource abundance and finds that 1) an increase of 18 percentage points in the share of natural capital from one country to the next is associated with a decrease in public expenditure on education by 1% of GNP; 2) a five percentage point increase in the share of natural capital is correlated with a decrease by one year in the schooling that an average girl at the age of school entry can expect to receive; and 3) a five percentage point increase in the share of natural capital is associated with a 10 percentage point decrease in secondary-school enrollment from one country to another [6, pp. 852–853].

Mining projects also create a number of public health risks such as migrant workers spreading sexually transmitted diseases such as HIV/AIDS which adversely affect the health of local residents. As the World Bank explains, “Miners in small-scale mining as well as in large-scale mining are often migrant workers, living without their families and within disrupted social contexts. This situation can contribute to a high prevalence of human immunodeficiency virus (HIV) and other communicable diseases in mining communities” [10, p. 5].

2.4. Mining, vulnerability and exposure to risks

Poverty reduction, the Bank emphasizes, also entails helping poor people manage risks and vulnerabilities [5, pp. 135–176]. Mineral resource extraction unfortunately contributes to a number of vulnerabilities and risks for poor people. Countries that are heavily dependent on resource exports are unusually vulnerable to economic shocks due to their lack of diversification and the cyclical nature of commodity prices. For the past century, the international prices for primary commodities, including minerals, have been more volatile than the prices for manufactured goods with this price volatility increasing since 1970. As Michael Ross explains, “This means that when countries become more dependent on oil and minerals exports, they also become more vulnerable to economic shocks” [9, p. 12].

Countries with a high level of resource dependency are also at greater risk of civil war. Indra de Soysa found that “an abundance of subsoil assets has a direct positive effect on intrastate armed conflict, net of

variables controlling for economic, political, and social factors” [7, p. 125]. Recent World Bank studies have similarly found that “countries which have a substantial share of their income coming from the export of primary commodities are radically more at risk of conflict” [11, p. 6] and that the “extent of primary commodity exports is the largest single influence on the risk of conflict” [12, p. 26].

The environmental impacts of mining projects can also increase the vulnerability of the poor. A corporate-sponsored review of the Ok Tedi mine in Papua New Guinea “pointed out that even if mining at Ok Tedi were to cease immediately, the problems downstream would continue to increase due to the sheer volume of tailings already in the river and ongoing erosion from waste rock dumps adjacent to the mine in the mountains....” The 1300 km² of rain forest along the river which is already dead or under severe stress is expected to eventually increase to as much as 2040 km² [13, p. 119]. In Zambia, copper smelters emit 300,000 to 700,000 tons per year of sulfur dioxide into the air. This contributes to soil contamination, as the sulfur dioxide emissions from the smelter are converted to sulfuric acid and induce vegetation loss downwind from the smelter stack emissions. The World Bank estimates that tens of thousands of residents may be affected by high levels of lead in the soil, some of which results from the impact of smelting and mining operations. Runoff and leakage from tailings dams and existing waste rock dams pollute streams flowing out of the mining area, causing widespread damage downstream [14, pp. 2–3]. As farmers and fishermen, poor people’s livelihoods often depend “directly on goods and services provided by ecosystems and the quality of, and their access to, natural resources” [15, p. 9]. Such dependence obviously exacerbates their vulnerability to mining-induced environmental degradation.

Mining can also increase the exposure of the poor to a variety of social risks. First, the rapid influx of people can lead to price inflation. As the World Bank explains, “higher incomes of mine workers can lead to rising local prices for key goods (food, fuel, land/housing) and services—with others in the area not only left behind, but with significantly shrunk real incomes” [10, p. 10]. Second, such population influxes can contribute to social tensions and new forms of poverty. According to the WBG:

One of the significant impacts of large scale mining on the local community is a rapid change in the economic and social fabric of society.... New types of poverty are created, with a mixture of “original residents” who have been unable to share in employment opportunities, and “newcomers” who have migrated in with the hope of finding employment, but have been unsuccessful in doing so. Social ills such as alcohol

abuse, prostitution and child labor often increase [10, p. 15].

2.5. Mining, voicelessness and powerlessness

Finally, the Bank argues that giving poor people a stronger voice in their respective countries' governance is vital to making state institutions more responsive to the needs of the poor [5, pp. 99–115]. Oil and mineral-dependent states, however, tend to be less democratic and more corrupt than other states.

Empirically, the work of Carlos Leite and Jens Weidmann at the International Monetary Fund (IMF) indicates that corruption is a frequent by-product of resource-led development. Leite and Weidmann divide natural resources into two categories: “fuel and ores,” whose extraction tends to be capital intensive, and “agriculture and food,” whose extraction tends to be labor intensive. Other things being equal, their empirical results suggest a sharp bifurcation here: “capital (labor) intensive natural resource industries tend to induce a higher (lower) level of corruption...” [8, p. 23]. More specifically, their findings “confirm that capital intensive natural resources are a major determinant of corruption” [8, p. 29].

Lucrative natural resources also have anti-democratic effects. Michael Ross's recent pioneering work analyzes data from 113 states between 1971 and 1997. He measures oil reliance based on the value of fuel-based exports divided by GDP. Mineral reliance is measured by the value of non-fuel mineral exports divided by GDP [16, pp. 325–327]. Ross also tests food and agriculture to examine whether or not other types of commodity exports also inhibit the growth of democracy.

His study generates two main findings of interest in terms of mining and poverty reduction. First, his empirical evidence clearly demonstrates that non-fuel minerals have strong anti-democratic effects. Using a 0–10 scale measuring democracy, he notes that “A state that is highly reliant on oil exports—at the 1995 level of Angola, Nigeria, or Kuwait—would lose 1.5 points on the democracy scale due to its oil wealth alone. A state that was equally dependent on mineral exports would lose 2.1 points” [16, p. 342]. Second, just as Leite and Weidmann found that labor-intensive renewable resources did not contribute to corruption, Ross finds that food and agriculture do not have anti-democratic effects. In his words, “oil and other minerals impede democracy, but other primary commodities—which generate few or no rents, produce less export income for the state, and employ a larger fraction of the labor force—do not” [16, p. 344].

In and of themselves, democracy and good governance will not eradicate poverty. The fact that resource-rich states do so poorly here, however, exacerbates the poor's voicelessness and powerlessness.

3. Theoretical arguments for mining as a path to poverty reduction [4, pp. 17–22]

3.1. The World Bank's continued support for mining

In spite of these various problems, the World Bank remains committed to the mining sector. In view of mining's poor track record on poverty reduction to date, it is worth asking: why does the Bank continue to believe in the promise of mineral resource extraction as a route to sustainable development?

The best answer is probably that there are a number of seemingly logical theoretical reasons for believing that mineral resource extraction could promote poverty reduction, which is the WBG's central mission. Seven of these arguments (discussed below) stand out as providing the core of the Bank's rationale for believing that extractive industries can contribute to poverty reduction.

3.2. The historical analogy

The Bank's first rationale for supporting mining as a means of poverty alleviation concerns what might be called reasoning by historical analogy. Essentially, the WBG argues here that mining has historically served as a viable route to national development in resource-rich countries like Australia, Canada, and the United States and that it can therefore play a similar role in poor countries today. As the World Bank explains, “natural resources-based activities can lead to growth for long periods of time.... Mining was the main driver of growth and industrialization in Australia and the United States over more than a century” [17, p. 4].

There are, however, a number of problems with such reasoning by historical analogy. First, as Thomas Power argues, such reasoning often just points out that mining was significant at various points in these countries' respective histories. Such factual statements are then, in his words, “converted into causal statements that mining was the engine driving the nation's development. No theoretical analysis or factual data is typically provided to support this move...” [18, p. 10]. Second, countries like Australia, Canada and the United States differed from today's resource-rich poorer countries in significant ways. Perhaps most fundamentally, each of them had stable legal and financial institutions in place *before* their mining industries became significant. These countries also developed in a different economic context when transportation costs and trade barriers were much higher than they are today. As Jeffrey Sachs and Andrew Warner explain, “when a natural resource has high transport costs, then its physical availability within the economy may be essential for the introduction of a new industry or a new technology.” Yet, given falling transportation costs, “the physical availability of

resources within the national economy is rarely as decisive as it was a century ago” [3, p. 3]. The fact that ores and unfinished manufactured goods can now be cost-effectively shipped around the world “has destroyed the links between mining and other sectors of the local economy that often existed historically and supported extensive economic development” [18, p. 32].

3.3. Mining and job creation

The Bank’s second rationale for supporting extractive industries centers around job creation. Mining can reduce poverty most directly through the creation of jobs which generate income for workers and their families. According to the World Bank, small-scale mining provides employment for about 13 million workers worldwide while large-scale mining provides direct employment for about 2–3 million workers. The Bank estimates that each large-scale mining job creates somewhere between two and 25 jobs with suppliers, vendors, contractors and others [10, p. 4]. The causal logic here is thus mining → job creation → income generation → poverty reduction.

While it is certainly true that the mining sector employs workers in poor countries, it is a capital-intensive, rather than a labor-intensive, sector. Thus, the *actual* number of jobs created is quite small in comparison to the size of revenues generated. Two WBG-supported gold mines in Mali illustrate this point well. The Sadiola gold mine is estimated to have created one mining job for every \$700,000 invested while the Randgold mine directly created 127 jobs, or one job for every \$1.23 million invested [4, p. 20]. One has to ask whether the WBG’s efforts here would not be better focused on promoting the development of more labor-intensive manufacturing or service industries.

3.4. Mining and revenue generation

Third, mining can theoretically make an indirect contribution to poverty reduction by generating large revenues for governments to use for targeted poverty reduction programs. As the World Bank explains, “fiscal income generated through taxes collected from the mining operation... can be used for means-tested or otherwise targeted policy interventions for poverty reduction” [10, p. 9]. The causal logic here is thus mining → taxes, revenues and royalties for the government → improved financing for targeted poverty alleviation policies → poverty reduction.

Mining exports undoubtedly generate substantial revenues for governments. As noted above, however, an abundance of natural resources also tends to both promote corruption and inhibit democracy. The result is governments that are neither accountable nor responsive to their poorest citizens. There is thus no guarantee that

revenues raised will be spent on health, education or anything else that will benefit the poor.

Beyond this, World Bank structural adjustment programs often debilitate the ability of the state to raise revenues from the mining sector. Using Ghana as an example, corporate income taxes which stood at 50–55% in 1975 were reduced to 45% in 1986 and further reduced to 35% in 1994. The initial capital allowance that investors could use to recoup their capital expenditure was increased from 20% in the first year of production and 15% for subsequent years in 1975 to 75% in the first year of operation and 50% for subsequent years in 1986. Royalty rates decreased from 6% in 1975 to 3.7% in 1987. Other revenue-generating duties such as the mineral duty (5%), import duty (5–35%) and foreign exchange tax (33–75%) were done away with entirely [19, p. 5]. Thus, the state’s capacity to ensure a sustainable flow of net returns from the mining industry is challenged by Bank recommendations to reduce royalties, corporate income tax rates, and customs duties on imported capital [19, pp. 15–16].

3.5. Mining and economic growth

A fourth channel through which mining can theoretically contribute to poverty reduction is by generating economic growth. According to the WBG’s Mining Department, “Growth in national income has been shown to benefit all groups, including the poorest.... Thus, growth in GDP/capita... can also be expected to reduce poverty profiles overall” [1, p. 13]. The causal logic here is thus resource extraction → economic growth → poverty reduction.

Leaving aside the Bank’s own argument that economic growth is necessary, but not sufficient, for poverty reduction, numerous empirical studies as discussed above have found that resource-rich countries tend to grow more slowly than resource-poor countries. In addition to the studies already mentioned, the World Bank’s Operations Evaluation Department (OED) “found that during 1990–99 there was a negative relationship between extractive industry dependence and economic growth for all WBG borrower countries.... Twelve of the most mineral-dependent nations... are classified as Highly Indebted Poor Countries, with some of the worst rankings on the Human Development Index prepared by the U.N. Development Program” [20, p. 12]. As Michael Ross concludes, “If growth is good for the poor, oil and minerals exports are bad for growth – and hence, bad for the poor” [9, p. 9].

3.6. Mining and technology transfer

Fifth, the Bank posits that mining can indirectly lead to poverty reduction through technology transfers. According to the World Bank, “natural resource-based

activities can be knowledge industries. Mining was the ‘national learning experience’ in the United States that led to building a strong technological system from which modern manufacturing developed” [17, p. 4]. The causal logic here is thus resource extraction → technological developments → expanded economic opportunities → poverty reduction.

Yet, Thomas Power argues that this link between mining and technological development has been severed, given the control of technical knowledge exercised by global mining firms today. As he explains, “transnational companies provide the... knowledge and technology to exploit developing countries’ minerals. This knowledge and technology is no longer developed indigenously.... There is little ‘learning by doing’ for citizens and businesses of developing nations...” [18, p. 27].

Even allowing that some technological diffusion takes place through mining investments, this does not necessarily make those investments well suited to promote poverty reduction through technological development. As Friends of the Earth highlights:

Even if mining can bring some innovation and technological advancement to a developing country, the more important question for the Bank is whether support of the mining industry is the *best way* to facilitate the expansion of a “national innovative capacity.” Opportunity costs must be considered. Given such other options as direct investments in education and training, or investment in more technology intensive sectors such as information technology or telecommunications, it is unlikely that mining investments are the optimal choice [21, p. 8].

3.7. Mining and infrastructure development

Certain infrastructure upgrading is usually necessary to enable mining projects to take place. In this sense, the Bank argues that resource extraction investments catalyze improvements in physical infrastructure, which themselves contribute to economic growth. A road that is upgraded to allow heavy equipment to travel from a mine to a port can also be a road that helps farmers get their crops to market quicker or that brings increased trade between previously unconnected villages. The causal logic here is thus mineral extraction → infrastructure improvements → expanded economic opportunities → poverty reduction.

The quality of these infrastructure improvements, however, often leaves much to be desired. As George Frynas notes of Shell’s contribution to road building in Nigeria, “most of these roads lead to oil installations, by-passing the local villages” [22, p. 48]. More than 40 years after oil was discovered in the Niger Delta, the vast majority of people there still do not have access to

basic infrastructure like electricity or pipe-borne potable water. Infrastructure improvements that either do not materialize or are solely designed to benefit corporate mining firms will not produce substantive poverty reduction benefits.

3.8. Mining and the creation of downstream industries

Finally, the Bank believes that resource extraction can indirectly contribute to poverty reduction by leading to the growth of lateral or downstream businesses. In simple terms, the basic idea here, as Michael Ross explains, is that the profits from mineral resource extraction “would be re-invested in industries that would process and add value to the oil or minerals before they were exported. Soon resource-rich states would be exporting aluminum cookware instead of aluminum ores, and plastic resins instead of crude oil” [9, p. 6]. The growth in these secondary or downstream businesses would then contribute to poverty reduction through some of the same channels mentioned above. The causal logic here is thus resource extraction → development of downstream businesses → jobs, economic growth, and tax revenues → poverty reduction.

There are, however, at least three problems with this logic. First, there is no guarantee that whatever spillover benefits are produced by mining investments will benefit local people or businesses. A recent assessment of World Bank extractive industries projects by the Compliance Advisor Ombudsman (CAO) found that in such projects “there is no presumption in favor of local or regional suppliers” [23, p. 27]. The experiences of local businesses with the Chad–Cameroon pipeline project also seem to bear this out. According to The Inspection Panel’s 2002 investigation in Chad, “much of the produce and services, such as food, catering and transport is imported. This is both because of tight specifications of what is required and because of problems of local capacity in the producing region to meet these specifications” [24, p. 87].

Second, and perhaps most importantly, the rapid decline in transportation costs has severed the link between mining and downstream processing. As Thomas Power notes, until the middle of the twentieth century, high transportation costs provided both an economic rationale and a form of natural protection that led to the development of manufacturing and processing facilities near mining sites. As he explains, “Because transporting mineral ores was often prohibitively expensive, ores were not just mined but also concentrated and refined at the mining site...” [18, p. 26]. As noted above, this link has now been effectively broken and minerals mined in Peru or Zambia may now be processed in Japan or South Korea.

Third, poor countries that wish to promote downstream industries soon run into protectionist trade barriers that rich countries maintain against their manufactured goods. While the majority of rich countries place no tariff barriers on the import of unprocessed minerals, countries that “wish to add value to these raw materials and export them in refined or processed form – such as... copper wire, or aluminum kitchenware” quickly run into a variety of tariff and non-tariff protectionist trade barriers [9, p. 10].

4. A new paradigm shift outlining necessary preconditions for poverty alleviation?

4.1. The World Bank's traditional response

The World Bank is certainly aware of these problems. Its “Mining and Poverty Reduction” publication, for example, highlights governance, corruption, poor macro-economic management, environmental damage, health problems, damaging socio-cultural interactions with indigenous peoples, negative economic effects on non-mining sectors and the sudden loss of jobs due to mine closures as among the significant negative potential effects that mining can have on poverty reduction goals [10, pp. 5–6].

The Bank's larger response to the poor performance of the mining industry in promoting poverty reduction focuses on government policy choices. Essentially, rather than view the occasional Botswana or Chile as an unusual exception to the general rule of the resource curse, the Bank sees any given country as having a more or less equal chance of transcending or falling victim to the resource curse. Specifically, the WBG posits government policy as the relevant intervening variable that determines whether mining contributes to poverty reduction or poverty exacerbation. The World Bank maintains that:

The contribution of a mining sector to a country's economy does not take place in isolation, but rather in the overall context of the country's economic management and institutions. *It is thus the quality and competency of these policies and institutions* that will determine whether a mining sector can promote economic growth, or whether revenues generated by the sector might impede development [1, p. 12].

The bifurcated causal logic here is thus mining + good governance → poverty reduction, while mining + bad governance → poverty exacerbation. As far as this goes, it is not controversial. There is no doubt that the mining industry can produce huge revenue streams for poor countries with few other economic options open to them, or that those revenues can potentially be used for things like primary schools or

rural health clinics that would benefit the poorest people within those countries.

To date, there have essentially been two main problems with the WBG's good governance as an intervening variable approach. First, for an organization that regularly resorts to this argument to justify its support for resource extraction, the Bank has refused to make good governance criteria a precondition for its involvement in the mining sector. As Friends of the Earth has pointed out:

the Bank currently supports or is considering supporting mining projects in countries such as Sierra Leone, Laos, Kyrgyz Republic, and Tajikistan—countries not often noted for their excellence in public administration. If the Bank can sponsor mining projects in these countries, one wonders if there are any countries that have regulatory regimes that are so corrupt or dysfunctional that the Bank would not consider financing their mining projects [21, p. 8].

In some cases, it appears that the World Bank does not even consider the degree of political risk in the countries in which it supports resource extraction projects. According to the conclusions of one World Bank report on the Republic of Congo, “It may be worthwhile for the Bank to make an objective, independent analysis of the political environment in a country to fully assess the risks before a project is undertaken” [25, p. 8]. The hypocrisy of touting the importance of good governance and yet not conducting political risk analysis in a country like the Republic of Congo is stunning. More generally, the CAO notes that the economic rate of return calculation used by the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) to determine project viability “does not take into consideration the broader governance factors that influence the potential positive benefits of extractives projects' revenues...” [23, p. 24].

The Bank's second main problem in this regard has been exaggerated self-confidence in its own abilities to create good governance quickly in countries where it has previously been lacking. Perhaps the best exemplar of this is the Chad–Cameroon pipeline project. The World Bank's support for three technical assistance projects related to this investment is an unprecedented attempt to ameliorate the negative effects of the resource curse. Yet, the Chad–Cameroon experience has led to what is often referred to as a “two-speed project,” where the construction activities relating to oil extraction proceed ahead of schedule, while the capacity building efforts designed to ameliorate the potentially harmful effects of the resource curse have encountered repeated delays.

In terms of the oil-related end of the project, the World Bank notes that “Physical implementation of the project continues to proceed well and first oil is expected

by the end of 2003, ahead of the schedule communicated to the Board [of Directors] in June 2000” [26, p. 6]. As might be expected, the oil companies involved have substantial experience drilling oil wells and laying pipelines, and this part of the project has advanced rapidly.

On the other hand, the International Advisory Group (IAG) notes “a lack of progress on all issues relating to capacity-building...” [27, p. 4]. In Cameroon, the IAG observes that “Most of the national capacity building programs have been announced, but many have failed to develop at the same pace as the consortium’s work” [28, p. 3]. While claiming some progress in Chad, the World Bank notes that “Overall capacity of the Government to monitor the project is still limited and critical situations have not been monitored...” [26, p. 9].

While there is nothing inevitable about the resource curse, its established track record shows that it is a compelling force to be reckoned with. To its credit, the WBG is trying to address this issue through its various technical assistance projects. A two-speed process where oil infrastructure developments proceed ahead of schedule and the various capacity building measures are repeatedly delayed does not, however, inspire much hope for ultimate success here. In the words of the External Compliance Monitoring Group, “the slow pace of the Capacity Building project is incompatible with the current development of the Consortium’s oil field and pipeline project” [29, p. 46].

Although it is too early to reach any firm conclusions on this project’s ultimate success or failure, the World Bank is taking quite a large gamble on its own ability to modify and improve governmental capacity, institutions and policies to ensure poverty reduction. To date, there are few signs of hope in this regard. The WBG’s attempt to transform the equation from one of resource extraction + bad governance → poverty exacerbation to one of resource extraction + good governance → poverty reduction does not appear to be working.

4.2. The basic problem with existing approaches

At the risk of oversimplification, the World Bank’s approach to mining and poverty reduction throughout most of the 1980s and 1990s could be characterized as a “Field of Dreams” approach. As in that movie, the WBG’s vision was guided by the ideal that “if you build it, they will come.” In this case, the Bank was trying to attract foreign investment from transnational mining firms. What they built to attract this foreign investment was an investor-friendly regulatory regime. The overall justification was that a more investor-friendly regulatory regime → more foreign investment → revenues, jobs and economic growth → poverty reduction.

As the WBG explained its role, “the World Bank today provides financial and technical support to its

member countries to enable them to undertake the necessary regulatory and institutional reforms, including privatization of State-owned mining assets, to establish the conditions to attract private-sector finance for non-fuel minerals development” [30, p. 2]. Looking specifically at sub-Saharan Africa, Bonnie Campbell and her colleagues argue that the “primary focus for the governments of African countries was seen to rest on how to take into consideration a precise set of concerns aimed at attracting investment and reducing investment risk for private mining companies” [19, p. 8]. This primary focus entailed such specific components as the WBG encouraging poor countries to reform mining codes, privatize state-owned enterprises, reduce royalty rates, allow expanded repatriation of profits and abolish duties. World Bank involvement in mining projects also reduced the political risk foreign investors faced in unstable countries.

These policies were successful in two important ways. First, whether enthusiastically or reluctantly, many developing countries implemented the WBG’s advice. By one count, 35 sub-Saharan African countries implemented 162 structural adjustment programs with the World Bank and/or the IMF during the 1980s and 1990s [19, p. 4]. Second, foreign investment in the mining sector expanded dramatically. Africa accounted for 4% of worldwide exploration expenditure in 1991. By 1998, this had increased to 17.5%. Mineral exploration and mine development investment in sub-Saharan Africa more than doubled between 1990 and 1997 [20, pp. 13–14].

Although foreign investment in the mining sector boomed, poverty alleviation did not occur. An investor-friendly environment was created but developmental, environmental, health, and social issues were marginalized and ignored. The end result was that “Minerals development has in the past decades been the province of the investor, who was often foreign” [31, p. xxii]. It was not, however, the province of the poor, indigenous peoples or the local host communities in mining regions.

4.3. The extractive industries review: a new paradigm shift?

Responding to persistent criticism, in June 2000, World Bank President James Wolfensohn promised to review the WBG’s support for extractive industries. The Extractive Industries Review (EIR) was formally launched in July 2001 with the appointment of Dr. Emil Salim, a former Minister of the Environment for Indonesia, as Eminent Person to head the review. The publication of the EIR final report in November 2003 and its formal presentation to WBG President Wolfensohn in January 2004 marked a watershed in thinking on how extractive industries can promote poverty reduction.

The publication of the EIR final report is significant in two principal ways. First, it decisively rejects the past 20 years of World Bank thinking that if you attract foreign investment, poverty reduction will necessarily follow. The title of the report, *Striking a Better Balance*, itself highlights the manifest inadequacies of the existing “investor-friendly only” approach. As the report puts it:

In the past, the WBG has successfully helped countries promote private investment to stimulate development. However, the focus of this development has been too much on economic development and too much on strengthening the private sector. If the WBG is to promote sustainable development and poverty alleviation through its involvement in extractive industries, it needs to rebalance its work and focus equally on the environmental and social aspects.... IFC and MIGA will need to make poverty alleviation and sustainable development goals explicit and equal to the economic and financial goals [20, p. 44].

Second, and related to the above, *Striking a Better Balance* outlines a clear framework of necessary preconditions that must be in place *before* resource extraction can successfully contribute to poverty alleviation. In this regard, the EIR “believes that there is still a role for the World Bank Group in the oil, gas, and mining sectors—but only if its interventions allow extractive industries to contribute to poverty alleviation through sustainable development. And that can only happen when the right conditions are in place” [20, pp. vii and 45]. The three main enabling conditions that the EIR believes must be in place are: 1) pro-poor public and corporate governance; 2) much more effective social and environmental policies; and 3) respect for human rights [20, pp. vii and 45].

In terms of pro-poor public and corporate governance, *Striking a Better Balance* asserts that indigenous peoples should give their free prior and informed consent throughout each phase of a product cycle, and that the WBG should only support projects that benefit all affected local groups [20, pp. 21 and 49]. The Bank should consider “direct” or “local and regional” poverty alleviation goals to ensure that an equitable share of revenues is provided to local communities and it should vigorously promote transparency at both the country and company levels [20, pp. 51 and 47]. It should also support governments in legalizing artisanal and small-scale mining (ASM) and making it environmentally and socially less harmful, while also ensuring that responsible participants of the ASM sector earn more from their activities [20 (pp. 52–53), 32]. Perhaps most significantly, the report clearly argues that the WBG should not support extractive industry projects in countries that do not meet certain minimal governance criteria. According to the report, “Explicit core and sectoral governance

requirements should be met before a project qualifies for IFC and MIGA funding” [20, p. 46]. Beyond this more general admonition, “Under no circumstances should the IFC and MIGA support oil, gas, and mining projects in areas involved in or at high risk of armed conflict” [20, pp. 46–47].

Striking a Better Balance also offers detailed and specific recommendations to ensure more effective environmental and social policies. It argues that no WBG-supported mining project should use riverine tailings disposal, and that World Bank cyanide effluent guidelines be revised so they are consistent with the most advanced comparable guidelines in Canada, the European Union and the United States [20, pp. 56–57]. Environmentally, the report argues that all extractive industries projects should be classified as “Category A” projects – likely to have significant adverse environmental impacts – unless there are compelling reasons to the contrary [20, p. 54]. Beyond this, it maintains that the WBG should not finance or assist any oil, gas, or mining projects that might affect existing World Heritage properties, current officially protected areas or critical natural habitats. More specifically, the WBG should “ensure that clear no-go zones for oil, gas, and mining projects are adopted on the basis of this policy and better integrated into land use management strategies” [20, p. 54]. Socially, the Bank should not support projects that result in forced resettlements [20, p. 55]. Internally, the WBG also needs to reallocate some of its staffing and budgetary priorities to give greater weight to social and environmental (as opposed to economic) issues. Instead of emphasizing quantitative lending targets, it should ensure that staff are rewarded “for their contributions to ensuring compliance with Safeguard Policies and maximizing poverty alleviation impacts” [20, p. 61].

In terms of respecting human rights, the report recommends that the IFC and MIGA should adopt all four of the International Labor Organization’s Core Labor Standards and not just two of them, as is presently the case. It also argues that indigenous peoples’ “rights to own, control, and manage their land, territories, and resources” must be recognized and guaranteed [20, pp. 59–60]. Acknowledging the Universal Declaration of Human Rights’ reference to “every organ of society” being responsible for human rights, it also argues that “Adoption of and demonstrated compliance with human rights principles should be a prerequisite for companies seeking WBG support for extractive industries” [20, p. 59].

5. Conclusions

This article started from the two assumptions that mining is potentially a great source of wealth for poor

countries, and that the resource curse is not inevitable. It then argued that while there may be sound theoretical reasons to believe that mining can contribute to poverty alleviation, its empirical track record to date has been dismal. The WBG's existing approach to mining and poverty reduction is not producing positive results and should be abandoned. Putting all of these points together, this article agrees with the spirit of the EIR's basic conclusion that social, environmental and poverty alleviation goals must be made explicit and given equal weight to more traditional economic and financial goals. Mining can positively contribute to poverty reduction, but only if certain essential preconditions are in place.

In this regard, the publication of *Striking a Better Balance* marks a paradigm shift in thinking about resource-led development. The report's recommendations and conclusions should be fully and comprehensively implemented. There are, however, at least four potential problems or reasons for caution in this regard.

First, the initial response from both industry and the World Bank itself does not appear favorable. Representatives from the oil industry, for example, explicitly reject the adoption of "no-go" environmental zones and oppose a ban on the forced resettlement of local communities [33, p. 6]. Those representatives claim to agree with the EIR's emphasis on good governance, and argue that "the problem is that of a 'Governance Curse' and not a 'Resource Curse'" [33, p. 4]. Yet, they also emphatically reject "strict prerequisite governance requirements" for WBG investment and maintain that "Requiring a wide-ranging set of governance standards before WB investment is permitted is not appropriate..." In the face of substantial evidence to the contrary, they also reject the need to sequence governance reforms *before* large-scale development of resource extractive industries and assert that "it should be possible to build improved governance as an EI project moves forward toward the completion" [33, p. 3]. More generally, they complain that extractive industry firms "may not be very interested to participate in projects if there are too many obstacles and conditions that are imposed on them by the WBG or their constituencies" [33, pp. 5–6].

A leaked "Draft Management Response" to the EIR final report also suggests that the World Bank has not accepted many of the recommendations put forward by a project originally commissioned by its own president. Although phrased differently, the Bank comes to strikingly similar conclusions to the oil industry on "no-go" zones and the sequencing of governance reforms. The Bank defends its existing Natural Habitats policy as "more pragmatic" than the "no-go" zones approach and maintains that it "does not feel it appropriate to sign on to lists of no-go zones that have not been endorsed by host governments" [34, paragraph 49]. The Bank also argues that the sequencing of

governance reforms *before* developing natural resources "is almost impossible, given the context in which the WBG works" [34, paragraph 29]. The World Bank also neglects its own significance in influencing governments to create investor-friendly environments by arguing that "In most cases, EI development will take place with or without WBG involvement, as governments, especially poor governments, and investors, are impatient to develop resources that promise tax revenues, jobs and profits" [34, paragraph 29]. While not explicitly rejecting the EIR's recommendation that indigenous peoples have the right to free, prior informed consent, the Bank adopts the much weaker language that it "will continue to aim for broad community acceptance of developments that impact them" and justifies this formulation, in part, on the grounds that "Governments and industry do not support prior informed consent where this would represent a veto on development" [34, paragraph 41].

Second, while the prospects of industry and WBG acceptance of this new paradigm of thinking do not appear good, there are also places where the EIR's recommendations arguably do not go far enough. At first glance, the EIR's promotion of transparency for such things as host-country agreements, economic and financial assessments, environmental and social assessments, and information on accident prevention and emergency response seems impressive [20, pp. 47 and 56]. No mention, however, is made of security arrangements, despite the fact that resource extraction firms have been complicit in repeated human rights violations involving security forces and the lack of transparency on company-government security arrangements is widely noted and frequently condemned [35, p. 1187]. The EIR's suggestions on dispute-resolution mechanisms also seem inadequate. The EIR's recommendation to "support the establishment of legal and regulatory frameworks, judicial reform, and arbitration tribunals for conflict resolution, which should give speedy and fair results" [20, p. 52] does not extend to enabling local communities to have access to international courts, discouraging governments from restricting such access or asking mining firms not to oppose legal action in their home countries of incorporation when affected parties lack access to impartial courts in their own countries [13, p. 130]. Finally, the EIR's "free prior and informed consent" procedures arguably do not go far enough in recognizing the rights of local communities as equal partners in mining projects. Heike Fabig and Richard Boele's criticisms of stakeholder management would appear to apply equally as well to the EIR's consent process. As they explain, "Unless stakeholders are in a position to exercise their 'stake' and claim the respect of their rights, stakeholder management is in danger of being labeled a public relations exercise that fails a company's stakeholders more often than it succeeds" [36, p. 208]. If consent really is to mean anything, as

Stuart Kirsch points out, “Indigenous communities should have veto power over projects which affect their land, livelihood and use of subsistence resources” [13, p. 129].

Third, there is a need to move further in the direction of social, environmental and human rights standards that are mandatory and legally binding. Descriptions of current non-mandatory requirements as “forward looking” [23, p. 4] or “high-level aspirations” [31, p. xvi] imply a degree of complacency that is not warranted here. Voluntary approaches are frequently insignificant. The EIR final report, for example, recommends that corporate best practice on human rights be measured by such things as corporate policy commitments to support the Universal Declaration of Human Rights and engagement in global human rights initiatives such as the UN Global Compact, the Global Sullivan Principles and the US/UK Voluntary Principles on Security and Human Rights [20, p. 39]. The Global Compact is based on nine principles covering human rights, labor standards and the environment, which are “all framed in vague and general terms and do not require any detailed or auditable commitments” [37, p. 22]. All such voluntary approaches “suffer from a major shortcoming, namely the woefully inadequate nature of monitoring and enforcement systems, which render these codes ineffectual” [38, p. 73]. In this regard, the CAO’s review of how IFC and MIGA extractive industries projects have dealt with sustainability issues found much higher average scores for mandatory social and environmental review criteria than they did for the “forward looking” non-mandatory review criteria. They conclude that “the existence of Safeguard Policies and guidelines has a demonstrable positive influence in ensuring that review criteria are addressed...” [23, pp. 11 and 34].

Finally, we need to be aware that there are also larger structural or macro-economic changes that greatly influence the likely success that mining can have in contributing to poverty reduction. As Thomas Power points out, current debt repayment policies significantly influence poor countries’ single-minded focus on mineral exports. The World Bank and the IMF have “often conditioned their loans to mining-dependent developing countries on the expansion of mineral exports,” and it is difficult to envision the successful diversification of these economies away from mineral dependence in the absence of major debt relief initiatives. Even if such diversification is attempted, it is unlikely to succeed unless rich countries reduce or eliminate various tariff and non-tariff barriers that discriminate against poor countries’ processed and manufactured goods [18, p. 35].

Comprehensive implementation of the assorted recommendations contained in the EIR final report offers the best chance to transform the mining industry’s performance and turn it into a real engine of poverty alleviation in poor countries. Two big dangers, however,

still remain. The first is that the report’s conclusions are rejected or grudgingly accepted and never substantively implemented. The second is that even if the report’s recommendations are implemented, they might not go far enough in addressing the assorted challenges poor countries face in trying to propel growth, sustainable development and poverty reduction through resource-led development.

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