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Ciaran O’Faircheallaigh

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USE AND MANAGEMENT OF REVENUES FROM INDIGENOUS - MINING COMPANY AGREEMENTS: THEORETICAL PERSPECTIVES

CIARAN O' FAIRCHEALLAIGH

Literature on the relationship between mining revenues and economic and social development can be roughly divided into two categories: theories that indicate that mining revenues are inherently unsuitable for securing indigenous development and theories that argue that the impact of mining revenues is influenced by contextual factors. Relevant contextual factors include the distinctive cultural and social features of various indigenous groups, the culture of mining companies, and the policy and institutional framework within which mining revenues are distributed. These theories provide guidance for empirical analyses of indigenous management of mining revenues. For example, a comparative analysis of indigenous communities in various policy environments may provide insight into effective institutional and policy frameworks for managing indigenous mining revenues. This should be coupled with research into the role of political leadership and policy making processes in developing these frameworks, matters generally ignored in the literature. Similarly, research into the impact of various indigenous cultures on fiscal management can inform consideration of indigenous governance mechanisms which can effectively manage mining revenues. It can also highlight the fact that what constitutes 'institutional quality' is subject to cultural interpretation. Importantly however, we may need to move beyond the current theoretical frameworks which posit mining revenues as either 'shaping' or being 'shaped by' indigenous culture, and instead recognise the dynamic interrelationship between these two variables.

Introduction

This paper focuses on revenue flows to indigenous groups or communities from agreements relating to mining on indigenous land, referred to here as 'mining revenues'. Drawing both on literature on the relationship between mineral revenues and national economic and social development, and on research that focuses specifically on the indigenous context, the paper identifies a number of concepts and theories that offer frameworks for understanding issues raised by indigenous mining revenues. The aims of the paper are to identify approaches that might be useful in framing empirical research the author is undertaking on mining revenues as



part of the ARC Linkage Project ‘Poverty in the Midst of Plenty’;¹ and to identify ways in which such work could contribute to wider debates about mineral revenues and national economic and social development. On this latter point, the paper argues that research on indigenous mining revenues has a great deal to offer, and highlights for example, the importance of culture as a factor influencing the impact of mining revenues, and provides an opportunity to focus on what is involved in developing ‘good’ institutions — an issue on which the wider literature is noticeably silent. Perhaps most importantly, this research may reveal that a key assumption underlying almost the entire ‘resource curse’ literature, that outcomes from mining revenues can be explained through approaches that rely on establishing unidirectional causality from independent to dependent variables, may be flawed.

The paper includes a substantial focus on policies and institutions that may assist in ensuring that mining revenues generate positive outcomes. It is acknowledged that some theoretical approaches imply that the impact of mining revenues is *inevitably* negative, which entails as a logical conclusion that there is no point in indigenous groups seeking to influence their effects, and that they should rather oppose mining on their traditional lands, or at least reject the revenues that mining can generate (Eggert 2001: 4-5, 14).

Mining revenues to indigenous groups occur in a variety of forms, for example: cash payments linked to project milestones such as signing of agreements and grant of project approvals; ongoing annual rental payments for use of indigenous land; or royalty-type payments linked to the volume or value of minerals extracted or to profits generated by companies that extract minerals. The purpose of this paper is not to consider optimal approaches to extracting revenues from mining projects (on this issue see O’Faircheallaigh 1999, Gibson & O’Faircheallaigh 2010). Rather the focus is on what effect revenues have, or might have, on the indigenous peoples and communities that receive them.² The paper’s focus on conceptual or theoretical insights means that it is not primarily concerned with empirical evidence regarding the actual impact of mining revenues on indigenous peoples and communities.

¹ ‘Poverty in the Midst of Plenty: Indigenous Economic Empowerment in the Development of Sustainable Indigenous and Local Communities’, Australian Research Council Linkage Project LP0990125.

² The paper does not touch on management of broader economic benefits potentially associated with mining on indigenous land, for instance employment or business development opportunities.

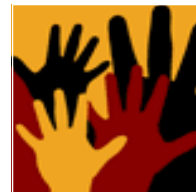


Reference is however made to such evidence to illustrate theoretical arguments or to indicate their potential relevance.

A review of relevant literature suggests that concepts and theories can usefully be considered under four broad headings. These are used as an organising framework only, and it is recognised that the boundaries between them may not be sharp or clear and that individual writers or approaches may be relevant under a number of them. Importantly, theories reviewed under separate headings may not be mutually exclusive and indeed may reinforce each other, leading to similar conclusions regarding the likely impact of mining revenues on indigenous peoples.

The first group of theories argues that there are characteristics *intrinsic* to minerals industries and the revenue flows they generate that make it inherently difficult to ensure that they create economic and social benefits for their recipients, including indigenous groups. These include a variety of approaches broadly described under the rubric of the ‘resource curse’. The remaining approaches take the view that the impact of mining revenues is shaped in important ways not only by their inherent characteristics but also by contextual factors. One approach argues that distinctive cultural and social characteristics of indigenous peoples and communities play a key role in determining the effects of mining revenues. Another approach, one that receives little attention in the literature, focuses on the culture and organisational practices of the corporations that generate mining revenues. The final group of theories is concerned with policy and institutional frameworks, arguing that these are the critical variables in determining outcomes.

Highlighting the inter-connections between various theoretical approaches, an important dimension of some ‘resource curse’ theories is their claim that the nature of mineral revenues inevitably shapes the policy and institutional settings created to manage them. Similarly, much of the ‘policy/institutional’ literature does not deny that negative consequences predicted by ‘resource curse’ theories may indeed eventuate, but argues that such consequences can be avoided, and positive outcomes achieved, through application of appropriate management responses.

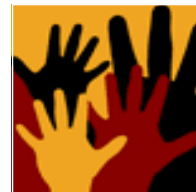


Two final points. First, various approaches differ in terms of the economic, social or cultural variables that mining revenues are assumed to affect. Much of the ‘resource curse’ literature focuses on the relationship between dependence on mineral revenues and economic growth, primarily measured in terms of Gross Domestic Product (GDP); or on the link between resource dependency and civil conflict (Brunnschweiler & Bulte 2008). Other approaches focus on the impact of revenues on institutional norms and behaviour; on social cohesion, quality of life, and the prospects for sustainable development; or on cultural vitality and integrity.

Secondly, the causal links underlying claims regarding the impact of mineral revenues are not always explicitly articulated (see for example Cademartori 2002), a point illustrated in the discussion below. Those links may of course be complex, particularly when the analysis focuses on cultural and social processes rather than, for instance, on a small number of macro-economic variables. But failure to explore causal links makes it difficult if not impossible to establish *why* mineral revenues generate specific effects, and therefore to establish whether other effects might eventuate in different social, cultural, policy or institutional contexts.

1. Inherent characteristics of mining revenues: ‘resource curse’ and related theories

A number of theories are grouped under the ‘resource curse’ rubric. Some operate at a national, macro-economic scale and are not relevant to revenue flows to indigenous peoples. These include the potential impact of fluctuating mineral revenues in increasing exchange rate vulnerability and so investment risk for potential foreign investors (Bucuane & Mulder 2007: 18) and the concept of ‘Dutch disease’. The latter emphasises that higher wages paid in the mining sector, combined with the effect of rising mining exports on currency exchange rates, can have negative impacts on the competitiveness of other exporting and of import-substitution industries (Eggert 2001: 9-10; World Bank & International Finance Corporation 2002:4-5).



However other elements of the ‘resource curse’ thesis could certainly be relevant (Langton & Mazel 2008: 36-37).³

Systemic threats to indigenous autonomy and survival

At a systemic level, mining and the revenues it generates can be seen as one dimension of wider changes that are integrating indigenous people into economic markets, in ways that involve commodification of social relations and the incorporation of previously diverse cultures and societies into a homogenous global system that privileges the economic over the social and cultural. Esteva (1992) for instance argues that since World War II there has been consistent pressure within the global system to represent as backward and deficient societies that have not been absorbed into a market economy which operates ‘as an autonomous sphere, disjointed from the rest of society’. He has analysed in detail the powerful forces pushing for the economic integration of cultures, including indigenous cultures, in which ‘non-economic assumptions govern lives ... [and which] find support in tradition as they continue to challenge economic assumptions in both theory and practice’ (Esteva 1992: 19).

Similarly, Kennedy (1996) regards oil extraction on the traditional lands of the Fasu in Kutubu in Papua New Guinea (PNG) as emblematic of a belief that there is only one path to ‘development’, involving large-scale foreign-financed exploitation of mineral resources and spelling an end to economic, social and cultural diversity. In his view such development is inherently problematic and unsustainable, and is only made feasible by the crushing of dissent from local landowners by the PNG State and the multinational companies involved. At the same time jealousy over distribution of oil royalties has generated conflict between the Fasu and their neighbours the Foe, breaching a critical alliance, and there has been a loss of food production capacity because of loss of land and complacency regarding company ‘hand outs’ (1996: 233). The nature of the causal linkages between oil development and the outcomes Kennedy describes is not always clear from his account (see, for e.g., Kennedy 1996: 247-249).

³ The focus here is on the implications of ‘resource curse’ theories for use and management of mineral revenues. Other aspects of ‘resource curse’ theory, for instance the claim that there are few linkages to local economies because inputs for mining are generally purchased elsewhere, could also be relevant to a more general analysis of the economic implications of mining for indigenous people. They are only addressed here to the extent that they are relevant to the impact of mining revenues.



Others writers on PNG emphasise that much of the momentum for resource development and the revenues it can generate actually comes from villagers themselves, rather than being imposed on them by an encroaching world economic system. Villagers are often determined to share in the benefits of modernity and see mining and the jobs and revenues it can bring as the only opportunity to do so (Macintyre & Foale 2004; Filer 2008). This perspective is not necessarily any more optimistic, it should be noted, regarding the social and economic impacts of mining revenues (Macintyre 2003; Macintyre & Foale 2004), but it does accord considerably greater agency to indigenous people. Indigenous agency is also recognised by Levitus (2009). He argues that Australian Government policy has in recent years attempted to assert more government control over indigenous life choices and pushed 'mainstream' economic participation as the only relevant policy aim, but takes the view that indigenous Australians do still have the capacity to decide what should constitute 'development'. Indeed he argues that indigenous organisations established with mining revenues can enhance the capacity of indigenous groups to make their own choices in that regard (Levitus 2009: 96-97; see also Altman 2004).

Specific economic consequences

One potential economic impact of mining revenues is on the allocation of factors of production within indigenous communities. For example, skilled labour could be withdrawn from other activities, including traditional food production, that cannot compete with the higher wages offered by organisations receiving revenues. The individuals involved would benefit from higher incomes as long as mining revenues continue. However, if skilled labour disappears or the level of skilled labour falls significantly, and there has been a failure to transmit skills involved in subsistence production, or if organisations deprived of skilled labour have failed to survive, there may be long-term negative effects for the indigenous group or community as a whole.

Another general feature of mining revenues that can create significant issues for indigenous communities is their fluctuating nature, associated with the cyclical character of global commodity markets. Sharp fluctuations in revenue can result in an inability to accumulate sufficient funds to finance major investments or service loans raised to fund indigenous enterprises, or to maintain community and social infrastructure that has been established using



mining revenues. Sustained periods of depressed prices may result in suspension of mining or permanent mine closure, with resultant loss of capital investments that can no longer be serviced. Fluctuating revenues can also create major obstacles to effective community planning (Alexander & Gilbert 2010: 48). Community plans may fail to anticipate unexpectedly large flows, with the result that a portion of revenues cannot be used to best effect, or may result in initiation of development projects that cannot be completed because revenues are unexpectedly low. In the face of unpredictable revenue flows, there may be a tendency for communities not to engage in planning, with a consequent failure to address underlying social, cultural and economic issues.

The timing of mining revenues can also be problematic. Clark (1999) notes that large mining projects tend to generate little revenue during their early years (because of lengthy construction times and capital write-offs or tax concessions available during the initial years of production) or towards the end of project life (as ore grades fall and production tails off). Yet it can be at precisely these stages of project life that there is the greatest need for public revenues to deal with the initial impacts of a major new project and to fund adjustments to its closure and rehabilitation costs. This may also be a major issue for indigenous communities, for the additional reason that revenues may be required early in project life for education, training and business development initiatives so that indigenous people and organisations are in a position to take advantage of the economic opportunities created by mining.

Another aspect of the 'resource curse' literature with obvious relevance to indigenous communities is the claim that mining projects tend to be poorly integrated into regional economies, flying in much of their labour, purchasing a high proportion of their inputs (goods and services) from metropolitan regions or overseas, and exporting raw minerals for processing elsewhere (Cademartori 2002; Ferguson 2005; Sovacool 2010; for a contrary view on this issue, see Davis & Tilton 2005, 239). In this regard Crowson (2009) notes that developments in transport, communication and mining technology have all served to make local sources of labour, services and manufactures less significant than during earlier decades when mining frequently represented an important 'engine of growth' in remote regions. The possible failure of mining to generate additional economic activity has important implications for indigenous mining revenues. It removes what might otherwise be valuable investment opportunities in



businesses servicing resident mineworkers and their families, or providing goods and services to mining projects. It may thus reduce the likelihood that revenues can be used as a basis for sustainable indigenous economic development. The absence of alternative income-earning opportunities heightens the importance of using mining revenues productively, but at the same time may mean that competition to gain access to these revenues is intensified and ‘rent seeking’ behaviour is more likely.

Behavioural, institutional and political responses

Another dimension of ‘resource curse’ theories focuses on behavioural, institutional and political responses to mining revenues (Ross 1999: 308-319). When prices and revenues are high, political leaders may be under pressure to increase spending and embark on major capital projects, and when prices decline it may be hard to rein in spending to match the available revenue (Sovacool 2010: 230). Access to mining revenues may diminish the incentives for indigenous groups to save to fund investment, by creating the impression that current and future wealth will be generated by mining (Bucuane & Mulder 2007: 18-19). The reality of this risk is illustrated by Eggert’s findings (2001) that countries rich in mineral resources save less than countries with comparable GDP per capita who are not mineral rich. The data he cites in this regard appear unequivocal. For example among high income countries, mineral rich countries had a negative savings rate of -8 per cent, while mineral poor countries had a positive rate of 13.5 per cent. As Eggert notes, this finding is highly significant in terms of prospects for long-term development, given the close relationships between savings and the capacity to generate both wealth and social well being (Eggert 2001: 45). The policy conclusion Eggert draws is that ‘an appropriate portion of the revenues from mineral production must be saved and invested in other assets for economic development to be sustainable’ (2001: 45). The issue, of course, is how this outcome can be achieved.

An important behavioural response may involve ‘rent seeking’; that is, a preoccupation with appropriating existing mineral revenues for immediate consumption, rather than engaging in productive activity that can generate additional economic and social benefits (Robinson, Torvik & Verdier 2006: 451). This diversion of talent and effort from productive enterprise may not only result in short-term economic and social opportunity costs, but eventually create a culture and an institutional landscape that undermines a community’s capacity to innovate

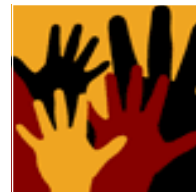


and generate new opportunities. Mining revenues may be particularly prone to cause rent seeking because of their high visibility, reflecting the degree of public attention generated by new mining projects and associated decision making processes; the fact that early in project life mining revenues represent a 'new' and yet-to-be-appropriated source of wealth; and a perception that the amount of money involved is substantial and so likely to reward the efforts of rent seekers. This perception may be reinforced by the fact that substantial 'up front' cash payments are often made to mark the signing of an agreement and/or the commencement of project construction.

Rent seeking generates sub-optimal outcomes because people's skills and resources are focused on dividing up the existing 'pie' of mining revenues, not on creating the largest pie possible in terms of the totality of wealth, material and cultural, available to an indigenous community. Rent seeking does not of itself necessarily deprive indigenous people of the benefits of mining revenues. However it can degenerate into corruption, so that people in positions of power begin to enter into arrangements with mining companies that allow individual indigenous people to appropriate mining payments for private benefit, in return for their support for decisions that benefit mining companies. This may not only deprive the indigenous community of benefits, but also result in serious harm where mining companies corruptly obtain approval from indigenous decision makers for activities that damage indigenous people and their land and sea country.

Neither does rent seeking inevitably generate inequitable outcomes. Negotiations around allocation of mining revenues, for example, may result in an outcome that is regarded as fair by the component parts of an indigenous group or community. However some individuals or families may be more adept than others at manipulating decision making processes through which revenues are allocated, resulting in growing inequality. Corruption is inextricably linked to rising inequality as the whole purpose of corrupt activity is to appropriate for private use benefits that would otherwise have been applied to public purposes (Sovacool 2010).

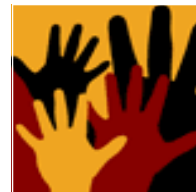
Another issue involves the impact of mining revenues on the nature and quality of institutions. For example, Pegg (2006) argues that resource dependence shapes the nature of institutions and concludes that 'capital intensive natural resource industries are a major determinant of



corruption' (2006: 379). Similarly, Sachs and Warner (1997: 23) found that 'resource abundant [developing] countries have poorer scores on a variety of measures of institutional quality'. Robinson et al (2006: 448) state that at a national level resource booms lead to 'highly dysfunctional state behaviour, particularly large public sectors and unsustainable budgetary policies' and a chronic tendency for the state to become overexpanded. Alexander and Gilbert conclude (2010: 10) that 'with few exceptions, the discovery of oil leads to a deterioration of governance ...', and note that even where appropriate policies and institutional arrangements are put in place, they are often quickly abandoned because of the incentives politicians face to divert resource revenues for their own purposes (2010: 33-34; see also Leite & Weidmann 1999; Ross 2010, 3).

In the indigenous context, it is possible that institutions as well as individuals might engage in rent seeking, turning their focus from wealth creation or promotion of indigenous social or cultural welfare to pursue organisational access to mining payments. The availability of mining revenues, especially where large and unexpected flows occur because of sharp mineral price increases, may create a false sense of prosperity, undermining prudent financial management and careful planning in organisations. It can both encourage and mask wasteful behaviour, discourage efficiency and innovation in indigenous organisations, and give rise to growth of inefficient bureaucracy (Bucuane & Mulder 2007; Sovacool 2010).

Also important is the response to mining revenues of 'mainstream' government institutions, particularly agencies that provide social services to indigenous communities. In their case 'rent seeking' may not involve efforts to gain access to mining revenues themselves, but rather withdrawing resources they currently commit to service provision for communities in receipt of mining payments and deploying them to other indigenous communities or to non-indigenous populations (Langton & Mazel 2008). In effect they attempt to maximise the resource applied to their areas of responsibility (for example health, housing, education) by leaving a funding vacuum that is filled from mining payments. It is important to note that such behaviour may not only cancel out the potential benefits associated with mining revenues, but may leave a community worse off because government agencies may misjudge the new income stream and 'overcompensate' by cutting their own funding by a larger amount (O'Faircheallaigh 2004). If government agencies do behave in this way, it may reflect a general tendency to 'cost shift'



that would be evident in response to any new source of funds, for instance an additional commitment by another level of government, rather than any inherent characteristic of mining revenues.

Macintyre and Foale (2007) argue that mining payments can also undermine the political authority of leaders and institutions by generating a belief that the new sources of revenue and the organisations that control them, rather than existing institutions and decision makers, have the capacity to deal with problems and issues facing indigenous communities (see also Levitus 2009: 88). This can undermine the autonomy and capacity of existing structures, which in turn can reduce their ability to deal with problems and issues generated by mining revenues. Ferguson (2005) makes a similar argument at the national level, arguing that one effect of oil revenues in Africa is to undermine state institutions, with oil companies providing many of the functions normally provided by the state in oil producing regions, including use of private security services to maintain order. Weakened states lack the capacity to govern and service non-oil regions, with the result that oil rich regions become ‘secured, enclaved and “globally” networked’ while the remainder of countries are excluded from development. More broadly, mining revenues can also undermine democratic representation and accountability, and prevent the emergence of democratic institutions, because they generate a substantial source of revenue that is, unlike taxes, channelled through institutions whose leadership is not subject to the discipline of elections or other forms of accountability (Alexander & Gilbert 2010: 12, 72; Crowson 2009: 23; Sovacool 2010: 231).

While ‘resource curse’ theories, as the term implies, argue that the effects of mining revenues must inevitably be negative, conceptually it is also possible that revenues might generate behavioural and institutional change that enhances indigenous welfare. For example institutional structures and capacities developed to manage mining revenues could be used as a foundation for more broadly-based economic, social and cultural development. There are certainly cases in Australia where this appears to have occurred (Marshall 1994; O’Faircheallaigh 2002). Similarly, the ‘arrival’ of mining revenues might conceivably trigger entrepreneurial, wealth-creating responses, rather than rent seeking. There seems no inherent reason why indigenous people should see revenues only as providing opportunities for rent seeking, rather than as a platform from which to launch entrepreneurial activity or to support



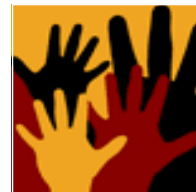
social and cultural activities and values that could substantially enhance community welfare. Indeed those specific features of mining revenues (their visibility, the fact that they are not already appropriated to support existing activities) might just as easily render them a ‘target’ for economic or social entrepreneurs. In other words ‘resource curse’ theories do not of themselves explain why behavioural and institutional responses to mining payments should *inevitably* be negative in their implications.

Social and cultural impacts

Mining payments can also lead to fundamental changes in indigenous social cultural practices, potentially undermining their viability over the long-term. Gilberthorpe (2007: 101), for example, argues that royalty payments from the Kutube oil field resulted in ‘the imposition of centralized judicial constructs of corporate landholding groups by the government and project operators ... [and] threatened the Fasu’s social world’. In her view the constitution of social and land owning groups has narrowed because of royalty payments, with seriously negative social consequences, including reducing the possibility of action by larger groups and isolating Fasu from regional trade and marriage patterns (2007: 101-103). The end result is to diminish prospects for sustainable economic development. Gilberthorpe does acknowledge (2007: 104) that the Fasu are ‘extremely wealthy by PNG standards’, and does not suggest what alternative avenues towards ‘sustainable economic development’, if any, were available to the Fasu.

In broader terms, the drive for codification and for certainty demanded by mineral developers as a prerequisite for the investment that will generate mining revenues can come into conflict with, and also possibly undermine, aspects of indigenous culture and society. For example Biersack (1999) argues that:

codifications as such, because they narrowly specify criteria and are rigid and insensitive to circumstances and mitigating factors, will always be problematic. [Indigenous] [o]perating principles tended traditionally to be plural, ambiguous, conflicting ... There were no principles that could not on principle be challenged; and resolutions and settlements were necessarily negotiated through adversarial processes ...



Thus codification can threaten the flexibility and adaptability that are at the heart of indigenous social vitality and sustainability.

2. The Impact of indigenous culture and society on mining revenues

While revenues may affect indigenous culture and society, there is a substantial literature, particularly from Australia and Papua New Guinea, suggesting that cultural, economic and social features of indigenous societies have a major influence and impact on the use of mineral revenues. As such, they are key to an understanding of the impacts and outcomes of mining revenues in indigenous communities. Much of this literature suggests that these features result in economically sub-optimal use of revenues, social conflict or even disintegration, and, in some cases, closure of the mines that generate revenues (Filer 1991; Trigger 2005).

Some analysts argue that fundamental conflicts arise because of the inability of traditional cultural and social structures to manage the distribution of mining revenues in ways that can support a social consensus. Filer (1991), for instance, argues that indigenous social structures on Bougainville lacked any mechanisms for ensuring inter-generational equity in the allocation of mining revenues and compensation payments. The result was a growing tension between generations, including within individual families, which eventually reached breaking point and led to the emergence of the Bougainville Revolutionary Army, the Bougainville rebellion, widespread social disintegration and the abandonment of the Bougainville copper project by Rio Tinto. Filer claims that such an outcome was inevitable, and would only have been hastened had the flow of mining revenue to landowners on Bougainville been greater, as the tension and social conflict created would have been proportionately more intense. Others (for example Banks 1999) deny the inevitability of any particular outcome, but do argue that the extended networks of social obligations that generally characterise indigenous groups will usually result in the rapid and widespread sharing and dispersal of mining revenues, precluding or at least rendering difficult the accumulation of revenues for capital purposes or for long-term investment.

Biersack (1999) emphasises that the wide dispersal of money often associated with complex and extended social networks is not necessarily associated with negative outcomes. She states that in the region of the Porgera gold mine in PNG, '[t]oday, as before, marriage and



hospitality are used to build and exercise networks, but the effort is specifically to undercut any polarisation of rich and poor which mining might create', which reduces social tension. More generally, she argues that the wide distribution of mining payments may build social capital that generates long-term economic, social and cultural benefits (1999: 278).

In the Australian context Peterson's work on 'demand sharing' in Aboriginal societies (Peterson 1997; Peterson & Taylor 2003; see also Martin 1995) could be considered to have similar implications. Demand sharing does not simply represent an economically-driven attempt by those with access to fewer resources to put pressure on their more fortunate kin to share their wealth. Demand sharing is also a social and cultural activity, for example, being used to test, reassert and reinforce kin, social and cultural relationships. As such it is both deeply imbedded and difficult for those faced with demands to circumvent. Peterson argues that demand sharing can play an important part in maintaining social relations, and that assumption that it is an inherently negative force represents a Western cultural view (1997: 189-90).

The centrality of and the widespread nature of kin and social networks is also sometimes considered to undermine the prospects for successful investment of mining revenues in business development, generating pressure to employ kin who are in excess of requirements or lack relevant skills, and to distribute rather than reinvest business profits (Trigger 2005: 51-54). However non-indigenous ethnic groups that place a heavy emphasis on family and kin obligations have been highly successful in business, and indeed their ability to mobilise social networks in support of their business activity can be seen as an important reason for their success. There seems no obvious reason to assume that the opposite must be the case in the indigenous context. In addition, some indigenous business groups in mining regions, for instance in northern Canada and the Pilbara, have enjoyed significant success, and there is no suggestion in the literature that this has required them to abandon traditional cultural or social forms.

The implications of indigenous cultural and social values for the economically and socially productive use of mining revenues are complex and not necessarily negative. Webs of social and cultural relationships may create pressure to disperse payments widely so as to meet



obligations and build social capital in the short-term, militating against use of revenues for long-term investment. However, broad distribution of payments may lead to equity in the allocation of resources, minimising social conflict and supporting equitable outcomes from their application.

In addition, countervailing pressure against immediate consumption of mining revenues may be generated by the belief of some indigenous peoples that the current generation is closely tied to past and future generations through cultural and spiritual ties to their traditional lands, increasing willingness to allocate part of mining revenues to long-term investment. This has certainly been a consideration in relation to some agreements in Australia, including the Western Cape Communities Co-Existence Agreement, where traditional owners decided to allocate more than 50 per cent of revenues to long-term investment (O’Faircheallaigh 2010: 167-70).

Another critical issue involves the nature of interests in land and associated social and cultural relationships. Indigenous interests in land are often complex, multi-layered, and fluid, and the interests of different indigenous groups in a single area of land may vary depending on the particular context in which those interests are being articulated. This reality can create significant problems in determining to whom, in what proportions, at what points in time, and over what periods mining revenues should flow (Kesteven 1983; Levitus 1991; O’Faircheallaigh 2008). This in turn creates obvious risks that the ‘arrival’ of mining moneys will result in disputation that is far from easy to resolve and in social tension that both represents a negative outcome in itself and can make it very difficult to ensure that mining revenues are applied to optimal social and economic effect.

3. Mining company culture

The literature has little to say about how the organisational and group culture of mining companies in general or of individual companies might affect the impact of indigenous mining revenues. Indeed, the author has seen no mention of it in the ‘resource curse’ literature. There appears to be an implicit assumption that the key factor is that mining revenues emerge in a particular form and with attendant effects because of the nature of mining as an industrial



activity and of mineral commodity markets. The issue of organisational culture is not identified as a significant variable.

One exception is the work of Sillitoe and Wilson (2003) in Papua New Guinea. They argue that company culture can have a profound impact on outcomes because of the tendency of corporations to insist that indigenous people they deal with adjust to and to some extent adopt their corporate values and structures. For example, they note that mining companies generally have a strongly hierarchical structure, based on a small number of leaders at the top who direct the company using operating systems based on 'command and control'. The indigenous peoples they encounter, on the other hand, often have social systems that lack hierarchical leaders, have highly devolved authority systems and employ consensual decision making. Companies insist that indigenous groups identify 'leaders' and 'decision makers' with whom they can deal and who can (supposedly) both enter agreements with the company on behalf of the indigenous group as a whole, and ensure the compliance of the group with these agreements.

Companies also insist on setting up institutional structures with recognisable, Western legal forms and decision-making processes to receive mining payments. The indigenous people occupying key roles in relevant organisations are often former mining company employees who are well know to the company and familiar with its values, structures and operating procedures. The result is that a small number of indigenous people who are able to adapt to the 'western ethos' benefit disproportionately from mining payments, and that most affected indigenous people have little understanding of or affinity with the structures and processes used to allocate and manage money. The outcome is growing resentment and social tension.

These problems are exacerbated by the fact that many company personnel 'are ignorant of the foundations of Aboriginal identities and cultural values' (Howitt 1997: 8). More specifically, company personnel seem to have difficulty in coming to grips with the complexity and, in some cases, ambiguity involved in indigenous landowning systems. Companies insist on identifying, unambiguously, 'the landowners' for a mine site and related facilities and that compensation and mining revenue should flow to this group. This can cause enormous

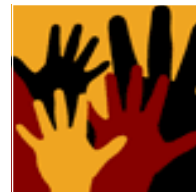


problems because it may result in many people who have legitimate interests being excluded (Sillitoe & Wilson 2003: 260-65).

4. Policy and institutions

Recent analysis of the empirical evidence regarding the role of mineral revenues in national development, and the so-called ‘resource curse’ more generally, suggests that there is no inevitability that resource revenues will have negative implications for development. Large-scale statistical studies and comparative case studies both suggest that the impact of mining and of mineral revenues varies from case to case. Brunnschweiler and Bulte (2008), synthesising a wide array of empirical studies, state that although there are individual countries where specific resources have eroded institutions or torn countries apart in civil strife, resource riches can be associated with high incomes and a lower risk of civil war (Brunnschweiler & Bulte 2008: 617; see also Eggert 2001: 12-14; World Bank/IFC 2002; Stevens 2003a, 2003b; Mehlun, Moene & Torvik 2006; Pegg 2006; Robinson et al 2006; Langton & Mazel 2008: 36; Sovacool 2010).

There is substantial evidence from a wide range of historical and geographical contexts that policy and institutions are critical in explaining the variation in outcomes. For example Crowson (2009: 31) argues that the limited contribution of nitrate revenues to Chile’s development in the 19th century reflected ‘the country’s largely inflexible social and institutional structure [which] inhibited the maximisation of benefits’. Sovacool (2010) found no evidence of the ‘resource curse’ in five mineral-rich South East Asian countries and regarded the nature of political institutions, including the enforcement of property rights and a predictable judicial system, as a critical part of the explanation (2010: 253-55; see also World Bank/IFC 2002: v, 6, 10, 12). Mehlum et al (2006) split their sample of ‘resource abundant’ countries into two subsamples of equal size according to the quality of institutions, judged by combining five indexes: a rule of law index, a bureaucratic quality index, a corruption in government index, a risk of expropriation index, and a government repudiation of contracts index. They found that ‘the indication of a resource curse only appears for countries with inferior institutions ... which the indication of a resource curse vanishes for countries with better institutions’ (2006: 1).



Robinson et al (2006) also emphasise the critical role of institutions. They argue that resource booms create incentives for politicians to use resource rents to buy votes, especially through the generation of public sector employment. Behaviour of this sort accounts for what is often identified in the literature as ‘policy mistakes’ or wasteful use of resources. In their view, it rather reflects rational responses to political incentives. The extent to which these ‘political incentives map into policy outcomes’ depends on the quality of institutions in the country concerned (2006: 447-48).⁴ They state:

the overall impact of resource booms on the economy depends critically on institutions since these can determine the extent to which political incentives map into policy outcomes. The relevant institutions here will be political ones which promote the accountability of politicians, and generally develop state institutions away from patrimonial practices towards the use of rational and meritocratic criteria in allocating public sector resources. Countries with institutions that promote accountability and state competence will tend to benefit from resource booms since these institutions ameliorate the perverse political incentives that such booms create. Countries without such institutions however may suffer from a resource curse (2006: 450; see also Sandbu 2006: 1153-54; Bucuane & Muller 2007: 20-21).

Clark (1999: 15-16) notes that particular problems in relation to institutional capacity and implementation skills may arise at the local level, in part because governments tend to allocate skilled personnel to politically-sensitive regions, which may not be those where mining projects are located. The latter regions urgently require skilled staff to deal with the impacts of mining and make best use of revenue that are returned to mining regions, but in Clark’s view the key institutional issue of who has responsibility for funding and implementing local level programs ‘remains unresolved in virtually every nation’ (1999: 21). He also claims that significant problems arise because funds that are allocated to the local level are rechanneled through ‘local authorities, whose experience and priorities reflect political, rather than developmental, realities’ (1999: 19).

⁴ It should be noted that the question of what represents ‘quality’ in the design and operation of institutions is both inherently political and needs to be culturally contextualised, points that are rarely acknowledged in the literature summarised here.



The evidence regarding the ability of ‘good institutions’ to avoid the ‘resource curse’ is not entirely unequivocal. In particular, as noted earlier, a number of authors argue that causality runs in the opposite direction, with institutions themselves being shaped by the existence of mineral revenues, rather than shaping the way in which revenues are used (Sandbu 2006: 1155-56; Williams 2011). Nevertheless, the overwhelming impression from the literature is that the institutional framework matters a great deal in determining the impact of mining revenues.

A number of studies argue that government policy on allocation and use of mining revenues is also critical (Cademartori 2002; Stevens 2003b). Eggert (2001: 14) argues that government policies ‘for managing mineral wealth play a decisive role in whether minerals are, in fact, a blessing or a curse’ (see also Robinson et al 2006: 450). In his view, policies must in particular address in a systematic way the following questions in relation to distribution and use of mineral revenues:

- What form should the allocation take?
- What are the eligibility criteria?
- What counts in the distribution (e.g. what entitles a party to more) and what are the underlying principles for determining this?
- What are the relevant precedents?
- How should competing principles and criteria be reconciled?
- What incentives does a rule create? (Eggert 2001: 62-63).

He then raises a series of additional and specific issues in relation to policy on investment of mineral revenues:

- How much to save and how much to invest?
- Who should invest?
- Where to invest (in the region in which mining occurs, elsewhere in the national economy, abroad)?
- In what to invest? In this case Eggert identifies the need to ‘develop mechanisms to ensure systematic and objective evaluation of possible investments in education, human health and infrastructure’ (2001: 67-74).



Other authors stress the importance of policies that affect the spatial distribution of mining revenues. Cademartori (2002: 40) identifies the need for regional sustainability funds designed specifically to support development in regions affected by mining. Clark (1999) argues that significant problems arise because funds are not directed to local governments that have to deal with impacts created by large mining projects. This last point is certainly relevant in the indigenous context, as noted by Langton & Mazel (2008).

It is also important to recognise that there is a need to develop specific policy mechanisms or institutional forms in response to particular issues raised by mineral revenues. These include the possibility of establishing revenue stabilisation funds to deal with short-term fluctuations in mineral revenues (Eggert 2001: 64; Stevens 2003a: 20-21; Bucuane & Muller 2007) and the need for governments to take appropriate measures to foster linkages between resource extraction and other sectors of the economy (Ross 1999: 305).

The literature is less helpful in identifying the specific types of institutional structures and capacities that are likely to maximise benefits from resource development and, particularly, how these might be developed. For example, neither Mehlun et al (2006) nor Robinson et al (2006) specify what sort of institutional change is required to enhance the 'quality of institutions', or how this might be effected. The World Bank/IFC (2002: 12-13, 15) discusses building management/institutional capacity, but only in general terms, and again is silent on how this capacity can be built. Other authors are more specific about institutional requirements, but are less clear about how these can be achieved. Ekkert (2001: 65-66) discusses the need to restructure institutions to simplify and clarify the mandates and jurisdictions of agencies and policies, thus avoiding the ambiguities that can allow political leaders to avoid accountability; and to clarify priorities via the budget process. Similarly, Renshaw (2001: 27-28) argues for the importance of ensuring that institutions are subject to democratic control and that this is facilitated where they operate on the basis of rules that are simple and clearly spelt out. Bucuane & Muller (2007) and Williams (2011) emphasise the need to enhance transparency around the allocation and use of mining revenues, but do not discuss how this might be achieved.



The literature is even less specific about how appropriate policies are to be developed and pursued. Some analysts reduce this to a question of ‘political will’. Alexander and Gilbert (2010: 7) state that ‘... an absence of political will continues to obstruct the use of oil revenues of the purpose of development and improving the lives of people’. They do not explain why ‘political will’ is currently absent or what can be done to generate it. Stevens (2003a: 24; 2003b: 11, 15-16) stresses the importance of access to appropriate skills in developing effective policy responses to mining revenues (see also Leite & Weidmann 1999, 19), but such access is only one part of the issue. Skills must be applied in an appropriate manner (Alexander & Gilbert 2010: 15, 29), and ‘implementing institutions’ must exist to translate the policy prescriptions developed by skilled personnel into action on the ground. Ross (1999) suggests that the failure to address the issue of how appropriate policies can be developed reflects the wider problem that the ‘political’ strand of the ‘resource curse’ literature suffers from a lack of rigorous analysis, and in particular has not attempted systematic analysis of policy failures, the reasons for them and, following on from this, how to deal with them (1999: 298-99, 322).

Many of the policy and institutional issues raised above are likely to be highly relevant in the context of indigenous mining revenues. Some policies may not, of course, be subject to the control of indigenous people. For example, Langton & Mazel (2008) argue that successive Australian and State governments have adopted policies that fail to return to resource rich regions, and in particular to their indigenous inhabitants, an equitable share of the revenues they generate. They show how in one region of the Northern Territory spending on health, education and other basic services was significantly lower on indigenous people than on the non-indigenous population (2008: 34-37, 44-45, 51-54). Such policies can seriously impact on the ability of indigenous people to generate benefits from the mining revenues they receive themselves, in three ways. First, they may feel compelled to allocate revenues to help fill the deficits left by inadequate government funding, and so be unable to allocate them to more productive investments. Secondly and related to this point, faced with serious poverty, indigenous people face considerable pressure to allocate revenue to consumption rather than investment (Langton & Mazel 2008: 51). Thirdly, under-investment in basic services by government may mean that the skills required to make best use of mining revenues are in scarce supply in the indigenous community.



Another aspect of policy relates to institution building which, as noted above, is regarded as key in maximising benefits from mining revenues. According to Langton & Mazel (2008: 34, 57-60), Australia's federal and state governments have done little to foster and at times have undermined, the emergence and development of autonomous indigenous institutional capacity. They have instead emphasised continued government control over people and programs. On the other hand, Langton and Mazel also highlight the potentially positive impact of government policies on the ability of indigenous people to maximise benefits from mining revenues. Examples include appropriate taxation incentives for indigenous entities managing mining revenues, and legislative action to address problems associated with the charitable trusts currently used by many Australian indigenous groups in managing these revenues (2008: 61-62).

In addition, indigenous groups may lack the legislative powers or political jurisdiction to themselves pursue some policy proposals identified in the literature. In this, Australia differs from some other countries. For example Sandbu's (2006) proposal for Natural Wealth Accounts, which involves distributing all resource rents to citizens and then recouping part of this income back in taxes, thus increasing transparency and citizen pressure on governments to use resource revenues wisely, assumes the capacity to impose taxes, which indigenous groups in Australia do not have.

Other policy issues *are* subject to indigenous influence or control. In particular, policy questions of the type raised by Eggert (2001) on the distribution of mining revenues and on the use of investment funds are in many cases determined by indigenous groups, albeit in some cases subject to overarching legislative requirements, for instance under the *Aboriginal Land Rights (Northern Territory) Act 1976*. The available empirical evidence suggests strongly that the way in which these policy questions are resolved has a major impact on outcomes from mining revenues (see for instance Altman & Smith 1994; O'Faircheallaigh 2002; Filer 2008).

There is limited empirical evidence on institutional frameworks because there have been few detailed studies of the operation of relevant indigenous institutions. However, what evidence does exist supports the salience of the institutional issues identified as important in the wider literature (Kesteven 1983; Levitus 1991: 2009; O'Faircheallaigh 2002: 180-229). These



include the way in which institutions do or do not mediate the incentives generated by mineral revenues for political leaders; the ability of institutions to support effective planning and priority setting; the degree of transparency associated with their operation; and the extent to which institutions facilitate transmission of demands by indigenous group or community members.

Levitus (2009: 78-89), referring more widely to indigenous institutional configuration in the Australian context, suggests four areas on which analysis should focus in considering the capacity of indigenous organisations to protect indigenous interests and promote development. These are the extent of correspondence between the organisation and the local Aboriginal group; the manner of payment and the extent of external oversight of funds paid to the organisation; the availability of other organisations able to provide the same services; and the internal coherence and integrity of the Aboriginal domain the organisation represents. These may provide appropriate foci for considering the significance of particular organisational structures in the context of managing mining revenues.

There are two other issues relevant to development of appropriate policies and institutional frameworks which attract virtually no attention in the wider literature on mining revenues. The first involves the nature of policy processes, or *the way in which* policies are developed and institutional options are considered and pursued. It is widely recognised in the public policy literature that policy processes, for example the timing of policy and institutional development, the degree and nature of public participation, and the criteria used in decision making, all have a major bearing on policy content and outcomes. While it is evident that these issues do have a major bearing on indigenous responses to mining revenues (O’Faircheallaigh 2010) and while their importance is occasionally recognised in the wider literature (Alexander & Gilbert 2010: 70), little detailed research has been conducted in this area.

The second issue involves leadership. The role of elites attracts considerable attention in the literature, and the tendency of elites to engage in rent seeking or corrupt behaviour, is often offered as one explanation for the failure to put mining revenues to good effect (Stevens 2003a: 14; Ferguson 2005: 380; Crowson 2009; Alexander & Gilbert 2010: 9-10). But the potentially positive role of political leadership in bringing about positive outcomes receives little attention (for exceptions see Stevens 2003a: 16-17; 2003b: 18-19; Alexander & Gilbert 2010: 15). In



fact, leaders can encourage or discourage rent seeking through their personal actions, and there are clear examples in Australia where leaders have done both (Kesteven 1983; Altman & Smith 1994; O’Faircheallaigh 2002). Leaders can also play a critical role in raising people’s horizons beyond the short-term, individual benefits represented by rent seeking, and instead develop the organisational capacity to use mineral revenues productively, which as mentioned above offers a key defence against rent seeking. This is an area that clearly deserves greater attention.

Conclusion

This discussion highlights a number of general issues that are likely to be critical in examining the use and management of indigenous revenues from mining. These include inherent characteristics of mining revenues, for example their tendency to be unstable and to accrue in temporal patterns that may be at variance with the need for resources to deal with the impacts of mining; their effect on allocation of factors of production; their impact on the incentives facing political leaders; and the critical importance of institutional and policy settings in shaping their impacts.

The discussion also indicates the potential relevance of an analysis of indigenous mining revenues to wider debates about the regional and national impacts of mining revenues and the ‘resource curse’. At a broad level, the question of whether and under what conditions mining revenues can make a contribution to economic and social development is highly contested. Though there are some differences between the issues involved at a national or sub-national level and those that arise in the indigenous context, many key issues arise in both contexts. The opportunity to consider those common issues in an indigenous context should offer important insights into the wider debate.

Of particular interest is the issue of policy and institutional design and the extent to which these determine the impact of revenues. A comparative case study analysis of a number of different indigenous communities operating with different policies and within different institutional settings offers not only the prospect of important practical lessons for indigenous recipients of mining revenues, but also an opportunity to generate findings of wider conceptual



interest. Such an approach creates an opportunity for exactly the sort of rigorous policy analysis that Ross argues has been absent from the ‘political’ component of the ‘resource curse’ literature.

A focus on the way in which appropriate policy and institutional capacity can be developed would be especially useful. As noted above, while the importance of institutions has been increasingly recognised and while there are some conclusions regarding desirable institutional characteristics, there is little in the general literature on appropriate institutional forms and even less about how these can be developed. A study of indigenous recipients of mining revenues that focuses on these questions would be of particular value. Two related issues that also deserve greater attention are the processes used in developing policies and considering institutional design, and the role of political leadership in shaping the way in which mining revenues are utilised.

Work on these issues needs to link to general questions of indigenous governance. Issues such as transparency, representation, institutional design, policy development and implementation, and leadership are all ‘core’ governance issues. To the extent that indigenous communities develop capacities in these areas in relation to mineral revenues, they will also develop general governance capabilities. To the degree that indigenous people develop such general capabilities, they also enhance their ability to effectively manage mining revenues. Thus it is important to integrate insights from the general literature on indigenous governance (see for instance Cornell & Kalt 2007; Limerick 2009).

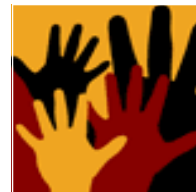
Another area of wider interest involves the regional dimension of the ‘resource curse’ and more generally of the impact of mining revenues. As Stevens (2003a: 9) notes, much of the existing literature focuses on the national and especially on the macro-economic level, while the regional dimension is largely ignored. The impacts of indigenous mining revenues are felt primarily at regional (and local) levels, and a focus on these levels would constitute a significant addition to the literature.

A final point relates to the influence of culture. As noted above, the literature on indigenous mineral revenues suggests that cultural factors can have a major effect on use of revenues.



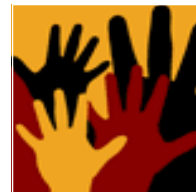
However this possibility is almost entirely ignored in the wider literature and especially in ‘resource curse’ writing. For example, the concept of ‘institutional quality’ is used uncritically without any awareness that judgments regarding what constitutes institutional ‘quality’ is likely to be at least in part culturally determined. From a broader perspective, judgements about what constitutes a ‘good’ or ‘bad’ outcome, a ‘curse’ or a ‘boom’, may themselves be in part culturally determined. Thus a focus on the influence of cultural factors in the indigenous context may have important implications for wider debates about the impact of mineral revenues.

The question of culture raises another and fundamental issue in relation to the ‘resource curse’ literature. It is clear from the earlier discussion that while indigenous cultures can influence the way in which mining revenues are used and the impact they have, mining revenues can also affect indigenous cultures. Given that this is the case, reality in this area is unlikely to be captured by an approach that treats mining revenue as either an independent (‘shaping culture’) or dependent (‘shaped by culture’) variable. In fact it may be both simultaneously, interacting with indigenous cultures in a dynamic relationship in which each influences the other. But the ‘resource curse’ literature is based entirely on a unidirectional model of causality, reflecting its dominance by statistical and econometric methods in which independent and dependent variables must always be specified, with causality running from the former to the latter (for a clear illustration of this approach see Leite & Weidmann 1999: 20-23). Thus some authors, as noted above, argue that revenues shape institutions; others that institutions shape the impact of revenues. The statistical methods that dominate the ‘resource curse’ literature do not allow for a situation in which mining revenues and institutions simultaneously shape each other. Whether or not this occurs, and what the consequences of the dynamic in different contexts are, can be resolved through comparative, qualitative case study work. Research of this type in the indigenous context offers insights of fundamental importance to wider scholarship on the relationship between mineral revenues and economic and social development.

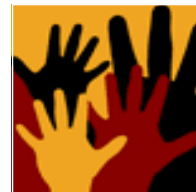


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