Natural Resource Exploitation and Regional Development: A View from the West

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Introduction

Australia's recent resources boom has promoted much popular discussion and debate about the economic, social and environmental consequences for those regions in which mining occurs. Perhaps nowhere are the outcomes of the resources boom more evident than in Western Australia, where the diversity and scale of projects is fundamentally reshaping many regions. Similarly, parts of regional Queensland, South Australia, New South Wales and the Northern Territory have experienced major transformations as a result of mining. Yet, perhaps surprisingly, understanding the complex links between natural resources and regional economies, communities and environments has been of relatively marginal scholarly interest amongst social scientists in Australia. This sits in sharp contrast to the more extensive body of research that has been conducted in North America, where a longstanding tradition of 'resource town' studies has focused on issues associated with social structure, cultural change, and economic development[1]. Much of this work pointed to the problematic relationships between resource dependence, socio-economic wellbeing and environmental conditions in these towns. Indeed, resource dependence was often found to be coupled with high levels of poverty, economic volatility, unemployment, social dislocation and low levels of environmental quality.

The interest in resource dependent communities in North America deepened in the 1970s when the Arab oil embargo led to an increasing number of 'energy boomtowns', particularly in the western United States[2]. A dominant theme in these studies was the 'social disruption thesis', whereby rapid economic and demographic change associated with large-scale resource development was understood to lead inevitably to social and psychological dislocation and a breakdown of established community social structures. This research pointed to a range of social problems, including high rates of crime and violence, mental health issues, drug and alcohol abuse, marital breakdown and a reduced sense of local social connectivity. Later, of course, the natural corollary of the boomtown studies was to examine the impacts of economic bust, as resource depletion and commodity price changes undermined the viability of local economies, services and social institutions[3]. More recent research has paid less attention to alarmist accounts of growth and decline, and has explored the considerable heterogeneity apparent in the economic, social and environmental experiences of resource communities[4].

While resource communities have received far less attention in Australia than North America, a number of studies have pointed to both similar experiences and some marked differences. The area of inquiry that has received most attention over recent decades is the interaction between resource development and Indigenous peoples. Much of the evidence suggests that despite a considerable expansion of resource activity in Australia, and numerous attempts to incorporate aspects of Indigenous development into resource projects, improvements in levels of employment, socio-economic wellbeing, health and education have been marginal[5]. Indeed, as Langton and Mazell have pointed out, the problem of 'poverty in the midst of plenty' remains acute where resource development and Indigenous peoples are concerned[6].

Other Australian studies have also contemplated some of the challenges associated with resource development, particularly in those places dominated by rapid growth. Some of the core concerns include infrastructure, housing and services[7], demographic change[8], labour force attraction and retention[9], and socio-economic wellbeing[10]. While elements of the social dislocation thesis are certainly evident in this body of work, collectively the evidence points to a diverse set of experiences that are dependent on a combination of macro-economic conditions, the resource itself, and locational context. This paper reflects on the implications of resource dependence for regional development, largely through a focus on the experience of mining in Western Australia, but also by synthesising the findings of research conducted elsewhere in Australia.

The Western Australian resource economy

For more than four decades Western Australia has led the nation's resource exports. The state's resource base is highly diversified, and includes iron ore, gold, oil and gas, nickel, bauxite, mineral sands, rare earths, diamonds, timber and fisheries. In terms of mining, the state produces some 50 different minerals across 513 commercial mineral projects and nearly 900 mine sites[11]. It is also host to 64 operating oil and gas fields, located predominantly off the north west coast[12].

Since the early to mid 2000s, the state has recorded a significant increase in the value of resource production, largely as a result of increasing global prices for commodities (Figure 1). Between 2001 and 2010, the value of metals production increased from a little over $17,036 million to $52,130 million; a rise of some 206 per cent. In the petroleum resources sector, the value of production increased from $10,511 million in 2001 to $21,275 million in 2009 (an increase of 102.4 per cent) before dropping to $18,776 million in the wake of the global economic downturn. Despite the global recession, considerable optimism and new investment have been evident in the resources sector. In late 2010 more than $130 billion had been committed to new resources projects within Western Australia.

One of the key characteristics of the resource industry in Western Australia is its distribution across the more remote parts of the state. Often resource extraction forms the bulk of the regional economic base, and the sole justification for settlement. This has led to the development of a large number of project towns where development is centred on a single company or commodity. Even where other economic activities are present, the economic and social fortunes of many towns rest on the performance of the resources industry. The vast majority of the state's resource dependent towns have residential populations of less than 6,000, though there are some exceptions such as Kalgoorlie (29,000), Karratha (12,000) and Port Hedland (13,000)[13]. The relatively small size of these communities tends to make them vulnerable to numerous exogenous forces, such as shifting exchange rates, commodity prices and trade policy.

In many respects, Western Australia's resource economy and regional configuration bears a resemblance to the type of staples development described by Canadian economic historian Harold Innis[14]. According to Innis, regions with an abundant supply of high quality, easily accessible natural resources often experience a truncated form of economic development that favours raw exports from peripheral regions to the 'urban core'. This leads to regional economies that are dependent solely on the extraction of the raw materials, in which value adding is largely non-existent. He goes further to suggest that governments, which become increasingly financially dependent on the staple, tend to reinforce this form of development through various regulatory

and other policy instruments. The outcome is a staples trap in which regions are beholden to a particular form of economic production, and are unable to move beyond resources dependence. In the context of Australia, recent debates about state royalties from mining and the introduction of the Mineral Resource Rent Tax reflect the cumulative dependence on resources as a source of state revenue.

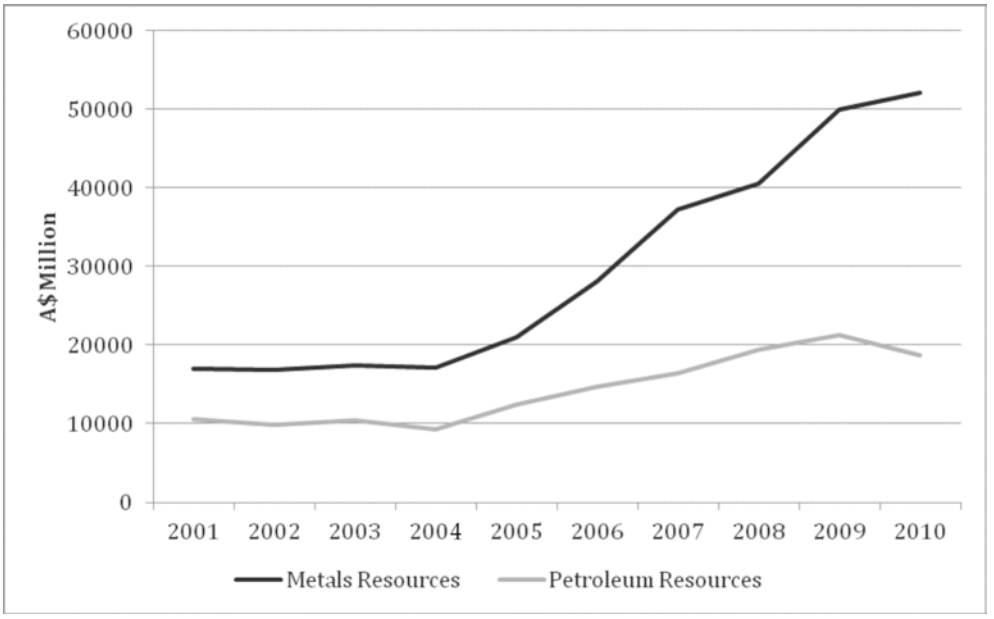

Figure 1: Value of Production for Metals and Petroleum Resources in Western Australia, 2001-2010. Source: Department of Mines and Petroleum (2010).

In terms of Western Australia's resource regions, staples theory suggests that local resource abundance might lock in resource dependence, rather than foster economic diversification, making resource communities more susceptible to economic and social vulnerability. In the Canadian context, geographers Barnes and Hayter have suggested that while resource dependence can lead to periods of rapid growth and/or stability, 'destruction and bedlam are always waiting in the wings'[15]. Of course, how highly remote resource towns can realistically diversify their economies and shield themselves from exogenous economic and political processes remains a significant challenge for regional policymakers. Nevertheless, all of this begins to raise questions about not only the nature of economic development in resource dependent regions, but also the socio-economic vulnerability and wellbeing of residents.

Social change and resource communities

The recent rapid expansion of resource activity in both Western Australia and other parts of Australia has begun to capture the attention of social scientists. Three core themes are readily apparent within this work: i) the impact on housing, services and social infrastructure; ii) socio-cultural and employment dynamics; iii) socio-economic wellbeing. The most voluminous body of research has emerged on the first of these themes, particularly through the work of Haslam-McKenzie and colleagues working on issues associated with housing availability and affordability[16]. Drawing on work in a number of resource settings, though predominantly the Pilbara, this work shows that

the rapid expansion of economic activity associated with the iron ore and natural gas industries has led to a rapid increase in housing costs, both in the rental and owner-occupier markets. While companies are able to access such housing for employees, other segments of the labour force and economy struggle to afford to remain in the market and therefore region. Indeed, Haslam-McKenzie's research suggests that housing stress contributes to a range of other socio-economic problems, particularly for low-income earners. This includes financial stress, homelessness, and a decrease in social capital. Moreover, housing stress is a major barrier for businesses and government organisations attempting to attract and retain employees, and therefore has the potential to constrain other parts of the economy and service base.

One of the means of overcoming these issues has been through Fly-In/Fly-Out (FIFO) employment. Indeed, across much of the resource industry this has become the dominant model of employment, with employees spending extended periods on site and often living in a camp, before returning to (usually) a major metropolitan area as their permanent residence. A typical shift might involve two weeks on site, and one week at home. In terms of regional development, the emergence of FIFO has been highly contentious. For companies it offers labour flexibility, and reduces the need to provide remote housing or build towns. For employees, it provides employment choice, and the ability to retain a family or residence in the city. Yet, for those regions in which mining occurs, there is an argument that FIFO undermines community interaction, local economic development, and local services; in essence, it sees both people and economic activity bypass local communities. There are also concerns about the impact of FIFO on families, particularly where family members are separated for long periods of time. In response, the Commonwealth Government's Parliamentary Committee on Regional Australia is currently conducting an inquiry into FIFO.

For those people who do live in resource communities, and particularly those communities that are growing rapidly, attention has also been drawn to the inability of these places to provide adequate services and social infrastructure for residents. Such is the pace of growth that both the government and public sector are unable to construct and operate essential infrastructure, including health facilities, schools and community facilities. There are strong resonances here with the social dislocation thesis that emerged in North America during the 1970s. However, more recent analyses suggest that many of these issues are transitory. Indeed, Smith et al resurveyed four 1970s United States' boomtowns during the 1980s and 1990s and found that most of the negative impact of rapid growth became less evident or disappeared entirely over time[17].

Research in a number of Western Australian towns suggests that rapid growth does not necessarily imply social dysfunction, and that the expansion of resources activity has often been coupled with improvements in levels of wellbeing. A recent study of social wellbeing in 33 small mining towns across the state found that on three key measures – welfare expenditure per capita, percentage of low-income households, and unemployment rate – these places were not necessarily as problematic as has sometimes been suggested[18]. Similar studies of larger centres[19] and local government areas[20] yielded similar results, and even suggested substantial improvements in aspects of social wellbeing.

Yet much of this work also reinforces Greive and Haslam-McKenzie's findings that the combination of cost of living and housing affordability remain a serious issue for many people[21]. It is also clear that on most measures of wellbeing, people living in regional

areas, including those communities impacted on by the mining boom, lag their metropolitan counterparts. On a range of indicators, including access to services, social welfare, health, and educational performance significant improvements are needed. Perhaps nowhere is this need more evident than for Indigenous peoples. While the benefits of the mining boom are being spread unevenly, in the case of Indigenous peoples the reality is stark, with large-scale mining projects often juxtaposed against extreme deprivation[22].

Contested development

The rapid expansion of mining activity has generated considerable controversy, particularly in relation to environmental values. Indeed, when compared to an industry such as agriculture, which has had a pervasive impact on natural environments, mining operates under a far more stringent set of guidelines and conditions. Yet, it attracts a great deal more attention. There are a number of apparent reasons for this, including the highly visual changes that mining brings to rural landscapes, together with the particular form of corporate capitalism that dominates the industry. By contrast, agricultural landscapes that are dominated by family farms are still often regarded as symbolic of national identity and struggle.

In the case of Western Australia, much of the socio-political conflict associated with resource development is concentrated in remote areas. Perhaps the most prominent in recent years has been the proposed gas processing facility on James Price Point near Broome, where the intersection of corporate interests, a government focused on state development, environmentalists, and Indigenous groups have contributed to one of the most contested of recent resource developments. While the state government is determined to push ahead with the development, which is argued to be 'in the public interest', other stakeholders point to not only the environmental damage associated with such a project, but also the possible social and cultural impacts. While considerable compensation payments and employment guarantees were proposed as part of an agreement between the state and developer, at the local level complex socio-cultural dynamics appear to be fracturing the Indigenous community. In the nearby town of Broome a different set of dynamics are at play, with local residents highly divided over the potential impacts; some argue the benefits of more jobs and economic growth, while others point to the potential erosion of amenity values and social cohesion.

One of the important characteristics of resource development in Western Australia is that it most commonly occurs on Crown land. This means that most of the land is held under leasehold, is under control of traditional Indigenous landowners, or is vacant and under government control (and generally subject to Native Title claim). Relatively rarely do resource developments emerge in areas of freehold land. As such, the type of land use conflict that has emerged in parts of eastern Australia over coal seam gas is uncommon, though not unheard of[23]. The emergence of the coal seam gas industry has seen issues associated with private property rights, exploration rights, environmental values, and food security coalesce into a complex set of social, political and planning problems. At present, the often incongruous planning and regulatory frameworks surrounding natural resource management are contributing to a lack of certainty for all stakeholders, underscoring considerable social and political conflict. As international and domestic demand for energy, food and water further increases, there seems little doubt that managing this conflict will become one of the major political challenges of the next decade.

Conclusion

Australia's resource economy shows few signs of slowing, and with major new investments on the horizon it seems likely that the regional communities that underpin the industry will continue to experience pressures associated with growth. This raises important questions about how these communities will cope with growth, the socio-cultural dynamics of resource communities, the nature of work, governance issues and the environmental impacts. All of this suggests an ongoing need for social scientists to engage with these communities as they attempt to manage what are likely to be highly complex and contested futures.

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[23] For example, recent exploration activity by coal miners in the Margaret River in the south west of the state has been the subject of considerable controversy, with miners claiming the right to explore and residents pointing to the potential negative impact of mining on environmental amenity, food and wine production and tourism.