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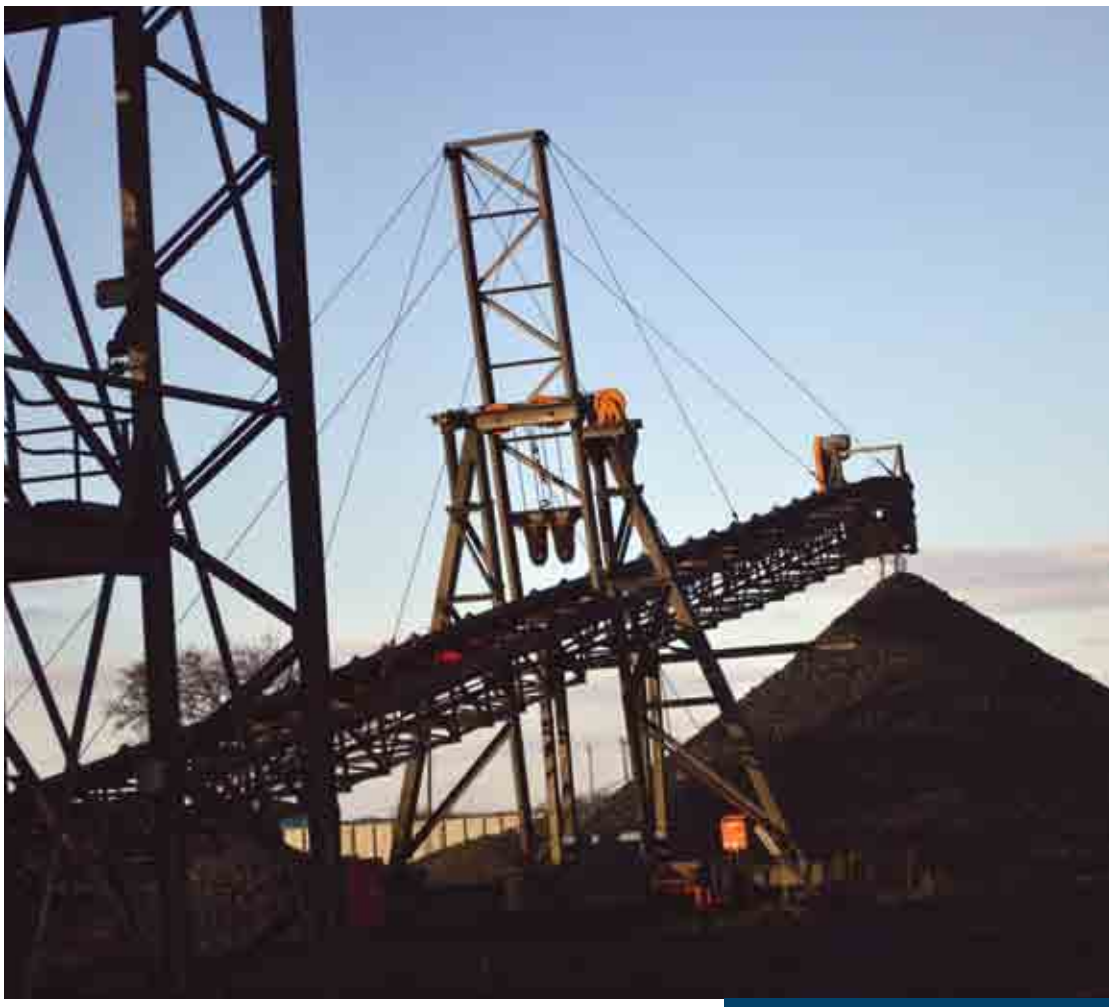
# MINERAL RIGHTS, RENTS AND RESOURCES IN SOUTH AFRICA'S DEVELOPMENT NARRATIVE

ROSS HARVEY



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## ABSTRACT

This paper explores potential explanations for South Africa's economic underperformance since 1994. Despite the country's substantial subsoil mineral wealth endowment, the development promise typically associated with such wealth has not been realised. The democratic dividend has produced some level of macroeconomic stability, but large fault lines have emerged, especially since the 2008 financial crisis. The paper examines whether 'Dutch disease' explanations can account for weak manufacturing performance, but finds that they are inadequate. Given mining's continued importance to the economy, the paper explores whether mineral resources could be better leveraged for inclusive development. It concludes that more coherent institutional choices are required if this is to come to fruition. Currently, the mineral rights regime, traditional leadership legislation and industrial policy are not sufficiently integrated to give effect to the ambitions of the National Development Plan as they pertain to the potential contribution of mining to the economy. Mineral rents could provide the impetus for upstream technology and product development, but the mining industry first has to generate growth. Beyond mining, economically inefficient visa regulations, electricity shortages and a general lack of policy clarity all contribute to South Africa's weak economic performance. Addressing these factors would attract the growth-inducing investment required for sustained and inclusive economic growth.

## ABOUT THE AUTHOR

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## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ARV | anti-retroviral |
| BEE | black economic empowerment |
| CGS | Council for Geosciences |
| DMR | Department of Mineral Resources |
| dti | Department of Trade and Industry |
| GDP | gross domestic product |
| GEAR | Growth, Employment and Redistribution |
| IMF | International Monetary Fund |
| MEC | minerals–energy complex |
| MPRDA | Mineral and Petroleum Resources Development Act of 2002 |
| MPRD-AB | Mineral and Petroleum Resources Development Amendment Bill |
| NDP | National Development Plan |
| NGP | New Growth Path |
| OECD | Organisation for Economic Co-operation and Development |
| RDP | Reconstruction and Development Programme |
| SIMS | state intervention in the minerals sector |
| WTO | World Trade Organization |

## INTRODUCTION

South Africa is endowed with substantial subsoil mineral wealth, yet the development promise typically associated with this wealth has not been realised. Between 2001 and 2008 the South African mining industry contracted at a rate of 1% a year, while comparable mining jurisdictions grew at an average of 5% a year.[1] This period marked the longest commodity price boom in recent history. South Africa's failure to capitalise on the boom provides a clue to the country's puzzling post-1994 economic and political development. Twenty-one years into a democratic dispensation, progress has been limited. Poverty remains a significant challenge, inequality is growing, and health and education outcomes are discouraging. There is an excess supply of unskilled labour, with an unemployment rate approaching 40% if broadly defined. The Organisation for Economic Co-operation and Development (OECD) estimates the long-term unemployment rate at 57.8% of the total number that are unemployed.[2] Economic growth is occurring predominantly in the non-tradable sector, which is not sufficiently labour-intensive to reduce unemployment. Growth in the tradable sector, which would absorb greater numbers of unskilled workers, is negligible.[3]

Contrary to many developing countries that possess abundant natural resources, though, South Africa counts as relatively well developed. It does not feature prominently in the 'resource curse' literature, which explores the paradoxical relationship between resource abundance and underdevelopment.[4] It has also developed relatively robust political institutions despite its resource wealth, the exception perhaps proving the general rule that resource wealth tends to have deleterious effects in weak institutional contexts.[5] However, given the continued importance of mineral resources to the country's political economy, a question must be asked about the extent to which mineral rents may contribute to South Africa's inability to deliver on its development potential.

South Africa appears to exhibit symptoms of Dutch disease (a term coined in 1977 by *The Economist*), although few scholars resort to this theory to explain the country's relatively poor economic performance. South African academics largely appear to favour the 'minerals–energy complex' (MEC) explanation for the apparent paradox. 'In brief, the MEC is to be understood in terms of the concrete form of accumulation of capital taken in South Africa, centred on a core set of sectors, but reaching beyond them in terms of

1 NPC (National Planning Commission), *National Development Plan: Vision for 2030*. Pretoria: NPC, 2012.

2 OECD (Organisation for Economic Co-operation and Development), *OECD Economic Surveys: South Africa 2015*, 2015.

3 Hausmann R, *Raising South Africa's 'Speed Limit'*. Johannesburg: Centre for Development and Enterprise, 2014.

4 For a recent review, see Van der Ploeg F, 'Natural resources: Curse or blessing?', *Journal of Economic Literature*, 49, 2011, pp. 366–420.

5 Robinson J, Torvik R & T Verdier, 'Political foundations of the resource curse', *Journal of Development Economics*, 79, 2006, pp. 447–468.

corporate control and influence.'[6] The concept refers to the 'core set of heavy industries and institutions that have evolved in and around minerals extraction and processing, and to their interaction as a distinctive system of accumulation, whose linkages and dynamics have determined South Africa's unique industrialisation path'.[7] Mineral rents have indeed been central to the country's development trajectory since diamonds were discovered in 1867 and gold in 1886, but MEC explanations for the current poor performance appear to be inadequate as they cannot accurately account for internal dynamics within the ruling coalition. One of the core arguments of this paper is that rent-seeking dynamics within the coalition hinder mining growth at the same time as wanting it to contribute to downstream beneficiation. These are mutually exclusive ends.

[R]ent-seeking dynamics within the coalition hinder mining growth at the same time as wanting it to contribute to downstream beneficiation

The paper begins with an exploration of recent development data indicating South Africa's lack of inclusive, pro-poor growth. Why has South Africa failed to capitalise on its post-1994 democratic dividend? With regard to mineral wealth specifically, it assesses whether Dutch disease explanations can shed any light on the country's poor performance. Alternatively, it explores whether poor performance can be attributed to South Africa's apparent inability to beneficiate its raw ores and metals. Should policymakers prioritise downstream beneficiation? The paper briefly explores the historical role that mineral rents have played in shaping the country's political and economic development. Following this, it notes how these rents continue to benefit politically connected insiders at the expense of pro-poor growth.[8] This section argues that mineral rents generate incentives for governing elites to choose institutions that are incongruent with optimal development practice.[9] These choices explain the lack of coherence between *actual* mining policy and what the country's National Development Plan (NDP) prescribes *in principle* for mining. The paper ends with the conclusion that mineral rents would contribute more optimally to development if mining policy were more stable and predictable, and cohered with industrial policy that incentivised the development of upstream industries.

## SOUTH AFRICA'S RECENT DEVELOPMENT HISTORY

In June 2015 an International Monetary Fund (IMF) report[10] revealed that real gross domestic product (GDP) growth, at a paltry 1.5% in 2014, was at its lowest since the 2008 global financial crisis. Protracted strikes (especially in the mining sector) and

6 Fine B, 'Engaging the MEC: Or a few of my views on a few things', *Transformation: Critical Perspectives on Southern Africa*, 71, 2010, pp. 26–49.

7 Capps G, 'Victim of its own success? The platinum mining industry and the apartheid mineral property system in South Africa's political transition', *Review of African Political Economy*, 39, 2012, pp. 63–84.

8 Seekings J & N Nattrass, 'State–business relations and pro-poor growth in South Africa', *Journal of International Development*, 23, 2011, pp. 338–357.

9 Acemoglu D, 'Why not a political Coase theorem? Social conflict, commitment, and politics', *Journal of Comparative Economics*, 31, 2003, pp. 620–652.

10 IMF (International Monetary Fund), 'South Africa: Concluding statement of an IMF staff visit', 23 June 2015, https://www.imf.org/external/np/ms/2015/062315.htm, accessed 31 August 2015.

electricity constraints were cited as the primary reasons for negative growth in per capita income (-0.88% from 2012 to 2013). A muted recovery to 2% GDP growth is expected in 2015–16. While lower oil prices have technically improved the country's terms of trade, internal constraints limit the potential growth benefits. A major oil refinery has recently shut down, for instance, contributing to a contraction in the petroleum industry, which constitutes 22% of South Africa's total manufacturing industry. This also reverses some of the potential gains from a lower oil price, as the country has to import more refined fuel than previously.

The IMF cites three major internal and two external downside risks to South Africa's economic performance.

Electricity shortages are the most severe risk, especially for an economy that is relatively energy-intensive. Mining and smelting, for instance, consume significant portions of the available supply. While the IMF is in support of Eskom's (the state-owned electricity utility) recent application for another tariff increase, the national energy regulator refused it on the grounds that Eskom had substantial room for efficiency improvement in its management and procurement processes. Eskom's penchant for mega capital projects such as Medupi and Kusile makes little economic sense in a stagnating global environment. Moreover, such projects are invariably corrupted by unproductive rent seeking and planning fallacies. Medupi was originally meant to start producing power in 2012 but was still not fully operational at the time of writing.

Labour market uncertainties and an associated skills deficit are identified as the second most severe constraint to growth. Despite strong evidence[11] that visa restrictions (which limit the import of skilled labour) retard growth, the South African government has implemented a widely criticised new visa regime. A 2015 Grant Thornton report estimates the cost of these regulations at ZAR[12] 1.6 billion ($114,000) in foregone direct spending from overseas tourists alone.[13] More generally, economic studies show that[14]

> [t]he gains from eliminating migration barriers dwarf – by an order of magnitude of two – the gains from eliminating other types of barriers. For the elimination of trade policy barriers and capital flow barriers, the estimated gains amount to less than a few percent of world GDP. For labour mobility barriers, the estimated gains are often in the range of 50–150 percent of world GDP.

Regarding industrial relations more generally, given the risk of violent strikes, most policy analysts continue to call for secret strike ballots. For reasons as yet unknown, South Africa's ruling party withdrew its own amendments to the labour law that would

11 See Clemens M, 'Economics and emigration: Trillion-dollar bills on the sidewalk?', *Journal of Economic Perspectives*, 25, 3, 2011, pp. 83–106.

12 ZAR is the currency code for the South African rand.

13 England A, 'South Africa tourism "crisis" after visa rules changed', *Financial Times*, 13 July 2015, http://www.ft.com/intl/cms/s/0/7a39d400-257a-11e5-9c4e-a775d2b173ca.html#axzz3kNvFSizw, accessed 31 August 2015.

14 Clemens M, *op. cit.*, p. 84.

have required this mechanism whenever an apparently unresolvable labour dispute arose between unions and employers.[15]

Other policy uncertainties, particularly as they pertain to minerals legislation and black economic empowerment (BEE) requirements, also continue to hinder growth. Externally, continued financial volatility and global secular economic stagnation (notwithstanding high but slowing growth rates in Asia) pose further downside risks.

## A DISAPPOINTING DEMOCRATIC DIVIDEND

South Africa's transition to democracy in 1994 was remarkable. Despite significant bloodshed between 1990 and 1994, civil war was avoided and the negotiated revolution brought the ANC into power with a sweeping majority. Inheriting a bankrupt and indebted state, the new government faced a complex set of challenges. Informed by the ANC's 1955 Freedom Charter, which called for a nationalist–socialist political economy agenda, the government attempted to implement its Reconstruction and Development Programme (RDP). However, it was unexpectedly constrained by internal and external factors. Internally, little money was available to implement the RDP. This meant that it had to attract capital internationally to ensure economic growth, the proceeds of which could then be taxed to fund the RDP. Two years into the democratic dispensation, the new government exchanged the RDP for a new macroeconomic framework: Growth, Employment and Redistribution (GEAR). GEAR emphasised fiscal discipline as a means of signalling to the global market that South Africa was a reliable investment destination. The framework also entailed a degree of trade and capital liberalisation. The government failed, however, to liberalise the labour market, which GEAR envisaged as crucial to effecting faster growth that would allow sustainable redistribution. Objection from the Congress of South African Trade Unions – a key constituent of the tripartite alliance – to labour market deregulation provides the first clue as to why the democratic dividend has failed to deliver improved competitiveness and productivity across the economy. The internal dynamics of the ruling coalition impose a constraint on South Africa's growth potential.

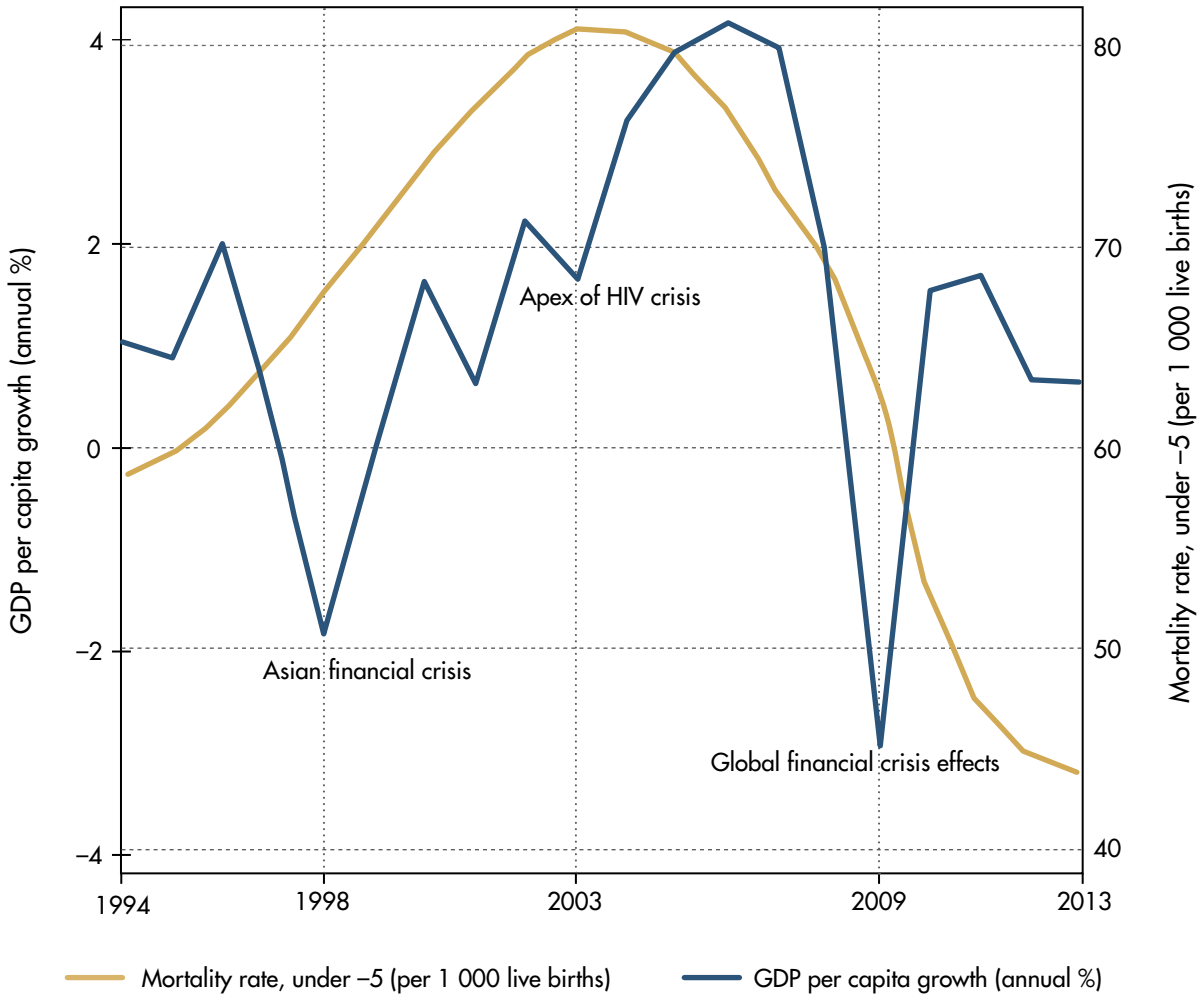
The democratic dividend should at least have fostered a reduction in poverty and an improvement in social welfare. One proxy indicator for social wellbeing (and how broadly distributed it is) is child (under-five) mortality, as it is typically concentrated among the lowest income quintiles. It is also a reliable, sensitive measure of a number of conditions, including 'access to clean water and sanitation, indoor air quality, female education and literacy, prenatal and neonatal health services, caloric intake, disease and, of course, income, that are hard to measure among the very poor'.[16]

15 Harvey R, 'Marikana as a Tipping Point? The Political Economy of Labour Tensions in South Africa's Mining Industry and How Best to Resolve Them', Occasional Paper, 164. Johannesburg: SAIIA (South African Institute of International Affairs), 2013, pp. 1–35.

16 Ross ML, 'Is democracy good for the poor?', *American Journal of Political Science*, 50, 4, 2006, p. 861.

Figure 1 illustrates South Africa's GDP per capita growth since 1994, juxtaposed with under-five mortality rates. It shows that the relationship is neither linear nor determinative. Despite recent declines, child mortality remains high in relative global terms.

**FIGURE 1** UNDER-FIVE MORTALITY AND GDP PER CAPITA GROWTH




Source: Author's compilation using World Bank, 'World Development Indicators', databank, http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators, accessed 3 July 2015

One would expect inclusive GDP per capita growth to result in a concomitant decline in child mortality rates and vice versa. Between 1994 and 1998, a decline in GDP per capita growth did indeed correlate with an increase in child mortality, although the latter continued to worsen even as growth recovered, peaking at its worst in 2003. The apparent relationship is attributable to a number of intervening variables. First, the benefits of

increased growth were unequally distributed at the beginning of democracy, and the government inherited a largely uneducated workforce and a narrow tax base. Second, the HIV crisis reached an apex in 2003, characterised by the government's lack of prior willingness to provide anti-retroviral (ARV) medication. The roll-out of ARVs from 2004 onwards largely accounts for the steep decline in child mortality, almost independent of per capita growth declines. Furthermore, as weak as GDP per capita growth performance has been, it has nonetheless provided the state with sufficient revenue to roll out both ARVs and one of the world's largest social grant systems. However, life expectancy is still only 61 years. According to the IMF, 53.8% of income remains in the hands of the top 10% of the population, whereas the poorest 20% of the population only own 2.5% of the income share, and the Gini coefficient is 65, the highest in the world.[17]

Why has the democratic dividend been so disappointing? Should one even expect that democracy would produce inclusive growth? To answer the second question, recent empirical evidence strongly suggests that democracy causes economic growth.[18] This is a radical claim for economists to make, especially as a summary of the literature in 2005 concluded that 'the net effect of democracy on growth performance cross-nationally over the last five decades is negative or null'.[19] Michael Ross similarly argued that there is 'little [cross-country econometric] evidence that the rise of democracy contributed to the fall in infant and child mortality rates'.[20] He showed that many cross-country studies simply ignored authoritarian regimes that had succeeded in improving social welfare outcomes. This selection bias prejudices policymakers in the wrong direction.

China is one obvious but significant example. Its phenomenal success in growing its way out of mass poverty in the past three decades has, in many respects, led to policy recommendations in the rest of the developing world that encourage authoritarian growth. The idea is that democracy, especially weaker or unconsolidated democracies, creates policy paralysis and unnecessary inefficiency owing to the opportunity costs of extensive consultation and policy horse-trading. Moreover, the wealthy are able to use patronage to capture democratic politics, which limits the provision of public goods.[21] Attraction towards the Chinese model is therefore understandable. China's successful resistance to the liberalised Washington Consensus has especially impressed African countries. China's growth model has provided the rationale for the extensive deployment of beneficiation language, especially in African countries desiring improved terms of trade – to export higher-end products instead of mere raw materials – directed by

17 IMF, *op. cit.*

18 See Acemoglu D *et al.*, 'Democracy Does Cause Growth', Working Paper, 20004. Cambridge, MA: NBER (National Bureau of Economic Research), March 2014, http://www.nber.org/papers/w20004, accessed 31 August 2015; and Bates RH *et al.*, 'The new institutionalism and Africa', *Journal of African Economies*, 22, 4, 2012, pp. 499–522.

19 Gerring J *et al.*, 'Democracy and economic growth: A historical perspective', *World Politics*, 57, 3, 2005, p. 323.

20 Ross ML, 2006, *op. cit.*, p. 872.

21 Acemoglu D, Ticchi D & A Vindigni, 'Emergence and persistence of inefficient states', *Journal of the European Economic Association*, 9, 2, 2011, pp. 177–208.

centralised state control over the economy. However, the Chinese story requires a more nuanced understanding. Many scholars agree that its economic growth is largely a function of 'directional liberalism' in terms of its economic institutions.[22] Since 1978, economic institutions have become incomparably more inclusive than in the Mao era. At the same time, Acemoglu and Robinson make the important point that growth in China has been predicated on the adoption of existing technologies and rapid investment, rather than on creative destruction.[23] They show that property rights are still not entirely secure; expropriation sometimes occurs for no apparent reason. Furthermore,[24]

> [t]he extent to which economic institutions are still far from being truly inclusive is illustrated by the fact that only a few businessmen would even venture into any activity without the support of the local party cadre or, even more important, of Beijing. The connection between business and the party is highly lucrative for both. Businesses supported by the party receive contracts on favourable terms, can evict ordinary people to expropriate their land, and violate laws and regulations with impunity. Those who stand in the path of this business plan will be trampled and can even be jailed or murdered.

For this reason, the authors conclude that Chinese growth in its current form is a typical example of growth under extractive institutions, unlikely to translate into sustained economic development. Throughout history, growth has occurred under extractive institutions but has invariably dissipated unless significant reform has occurred in the direction of inclusivity (most importantly in the formal institutionalisation of broad-based property rights). State centralisation is a necessary, but insufficient, condition for sustained growth, as witnessed particularly under the Soviet Union. Ultimately, a command economy is incapable of escaping the negative effects of its baked-in inefficiencies. The 'fragile foundations of China's financial system'[25] have also recently been exposed. As Roach put it, China's juggling act may prove difficult for the political authorities to keep in place: 'Caught in the transition from China's tightly controlled, state-directed model, the government seems to be waffling – for example, by stressing a decisive shift to markets, only to intervene aggressively when equity prices plummet.'[26] The political will to see through a transition to more liberalised and balanced growth may be stymied in China's one-party state.

Throughout history, growth has occurred under extractive institutions but has invariably dissipated

To further support the general importance of inclusive political and economic institutions for sustainable development, Acemoglu and his co-authors recently found a 'robust and sizable effect of democracy on economic growth',[27] using a number of empirical strategies

22 Huang Y, *Capitalism with Chinese Characteristics*. Cambridge University Press: New York, 2008.

23 Acemoglu D & JA Robinson, *Why Nations Fail*. New York: Crown Publishers, 2012.

24 *Ibid.*, p. 462.

25 Walter C & F Howie, *Red Capitalism: The Fragile Foundations of China's Extraordinary Rise*. Singapore: John Wiley & Sons, 2011.

26 Roach S, 'China's complexity problem', Project Syndicate, 25 August 2015, http://www.project-syndicate.org/commentary/china-complexity-problem-by-stephen-s--roach-2015-08, accessed 27 August 2015.

27 Acemoglu D, Ticchi D & A Vindigni, *op. cit.*, p. 1.

that overcome previous selection bias problems in cross-country estimations. Countries that switched from non-democracy to democracy achieved approximately 20% higher GDP per capita within the next 30 years. A startling finding within this study is that there is no differential effect of democracy on growth by the level of initial economic development. However, the authors do find some evidence that democracy is more conducive to higher GDP growth in countries where the transition to democracy is characterised by higher levels of education. A 2012 study by Gerring, Thacker and Alfaro concurs with Acemoglu, Ticchi and Vindigni that 'a robust causal relationship does appear if democracy is considered as a long-run, historical phenomenon'.[28] This is especially significant in the light of Gerring's previous 2005 findings (cited above) that the net effect of democracy on growth was negligible.

In the case of South Africa, unequal initial development did not pose a significant hindrance to growth. The incumbent party proved adept at reducing the country's debt without resorting to IMF loans, and economic growth occurred. However, poor levels of education in 1994, the quality of which has only deteriorated since, account in large part for South Africa's weak economic performance. An initial democratic dividend appears to have given way to the effects of structural inadequacies, the foundations of which were laid long before 1994 and which the currently ascendant faction of the ruling coalition appears unable to overcome. This coalition is also not formulating or implementing growth-conducive policy. The ascendancy of the Department of Trade and Industry (dti), under communist influence, for instance, has seen the formulation of industrial policy that attempts to mirror China's economic model (despite having neither the equivalent human capital nor the physical infrastructure with which to do so). This is complemented by a very clear foreign policy turn of 'looking east'. The ruling party's national general council 2015 discussion document unequivocally states that China's economic development trajectory is a leading example of 'the triumph of humanity over adversity'.[29] Praising the leadership of the Chinese Communist Party, the document points to the party as its 'guiding lodestar'.[30] This hardly seems compatible with the democratic vision laid out in South Africa's 1996 constitution.

However, as Gerring and others put it, 'all political-institutional variables are time-dependent, which is to say that their effects today are a product, in part, of their histories'.[31] If so, researchers must attempt to ascertain the way in which present outcomes depend on past choices. This paper does so, but first examines other explanations for South Africa's underdevelopment.

28 Gerring J, Thacker SC & R Alfaro, 'Democracy and human development', *The Journal of Politics*, 74, 1, 2012, p. 14.

29 ANC (African National Congress), 'National General Council 2015 Discussion Documents', *Umrabulo Special NGC Edition*, Marshalltown: ANC, 2015, p. 161, http://www.anc.org.za/docs/umrabulo/2015/ngc_disc_docsy.pdf, accessed 31 August 2015.

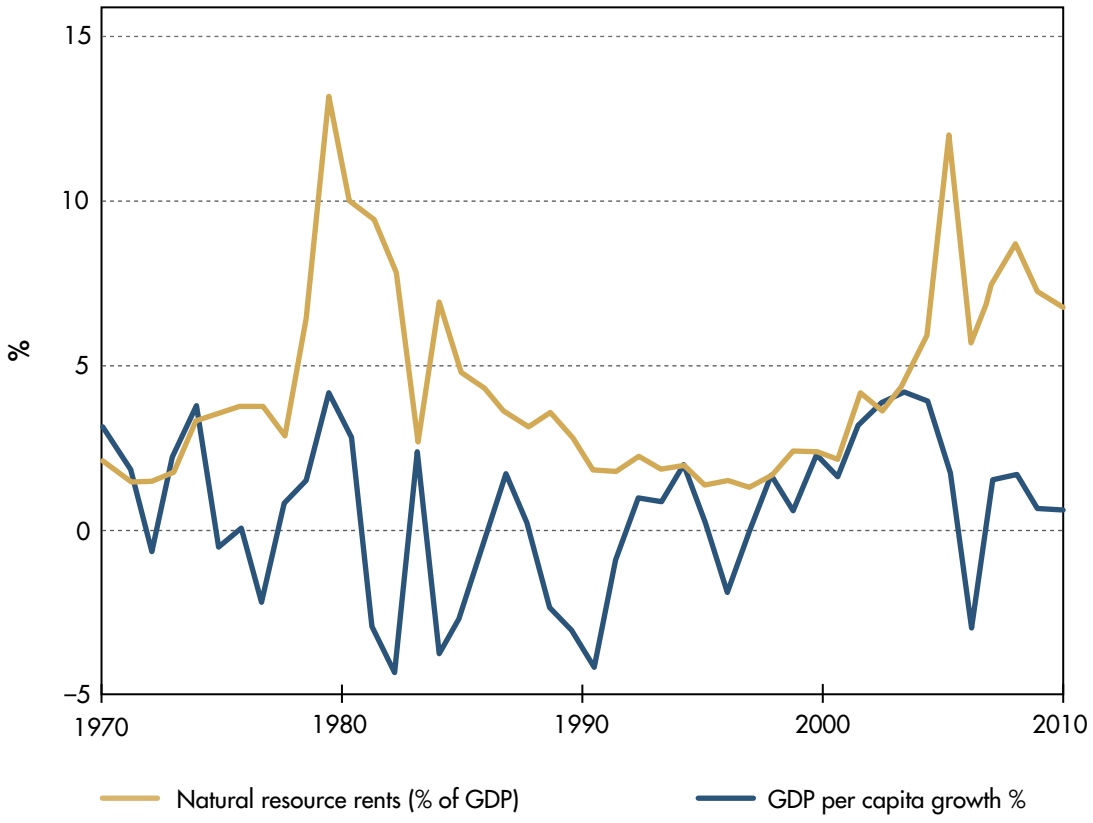
30 *Ibid.*

31 Gerring J, Thacker SC & R Alfaro, *op. cit.*, p. 15.

## IS THERE A SOUTH AFRICAN DUTCH DISEASE?

Figure 2 indicates the contribution of natural resource rents (as a percentage of GDP) and its relation to GDP growth per capita in South Africa since 1970. The lines almost mirror each other. When natural resource rents have contributed a large proportion of GDP in any given year, the corresponding growth per capita has almost invariably slowed. Without serious econometric work that properly controls for a multitude of factors and avoids selection biases, no causal suggestions can be made, however.

**FIGURE 2** SOUTH AFRICA: NATURAL RESOURCE RENTS AND GDP PER CAPITA GROWTH




Source: World Bank, 'World Development Indicators', database, http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators, accessed 20 May 2015

The relationship between GDP per capita growth performance and natural resource rents is the subject of a vast and inconclusive literature.[32] Consensus appears to be emerging, however, that the relationship is primarily mediated by the quality of a country's institutions;[33] in other words, the pre-existence of strong institutions may ensure that natural resource wealth contributes to quality growth. Similarly, the absence of such institutions may mean that natural resource rents are distributed towards unproductive activities that benefit elites at the expense of the majority. It may also be that the nature of such rents generates a particular set of incentives and consequent institutional choices.

In the case of South Africa, mineral rents historically generated incentives for mining magnates and the Transvaal government (the ruling elites) to inhibit the formation of an African farmer class, and create a reservoir of cheap labour for the mines instead. This was subsequently formalised through the 1913 and 1936 land acts, which granted 7% (and then 13%) of the total land area to the indigenous population. While it was highly productive agricultural land, it was also furnished under insecure communal tenure, undermining incentives to utilise the land productively.[34] Apartheid cemented and exacerbated this inequality by design. 'The limited data available for the late 1940s and 1950s suggests that downward pressure on African wages was such that it enabled a growth in real white wages and a rise in the profit share, especially in mining.'[35] Ironically, the political logic gained a momentum of its own that became fundamentally incongruent with the evolving needs of the economy. In other words, it is implausible to claim that apartheid and capitalism neatly cohered: 'Marxist claims about cheap labour being the basis for rising profitability and growth under apartheid [specifically 1960–1989] are not supported by the data.'[36] A subsequent decline in manufacturing profitability from the 1970s onwards was reflected throughout the entire economy, including mining. Apartheid's political imperatives undermined economic growth in both mining and manufacturing.

Figure 3 illustrates the composition of South Africa's exports since 1994. Manufacturing exports (as a percentage of total merchandise exports) reached a peak in 2002, and have been declining since then. That peak happened to coincide with a trough in ores and metals exports (as a percentage of total merchandise exports). Since then, despite the declining contribution of mineral rents to GDP, mining has contributed an increased share of merchandise exports, whereas manufacturing has seen a steady decline.

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32 See, for instance, Brunnschweiler C & E Bulte, 'The resource curse revisited and revised: A tale of paradoxes and red herrings', *Journal of Environmental Economics and Management*, 55, 3, 2008, pp. 248–264; Rosser A, 'The Political Economy of the Resource Curse: A Literature Survey', Working Paper, 268. Manchester: Institute of Development Studies, 2006.

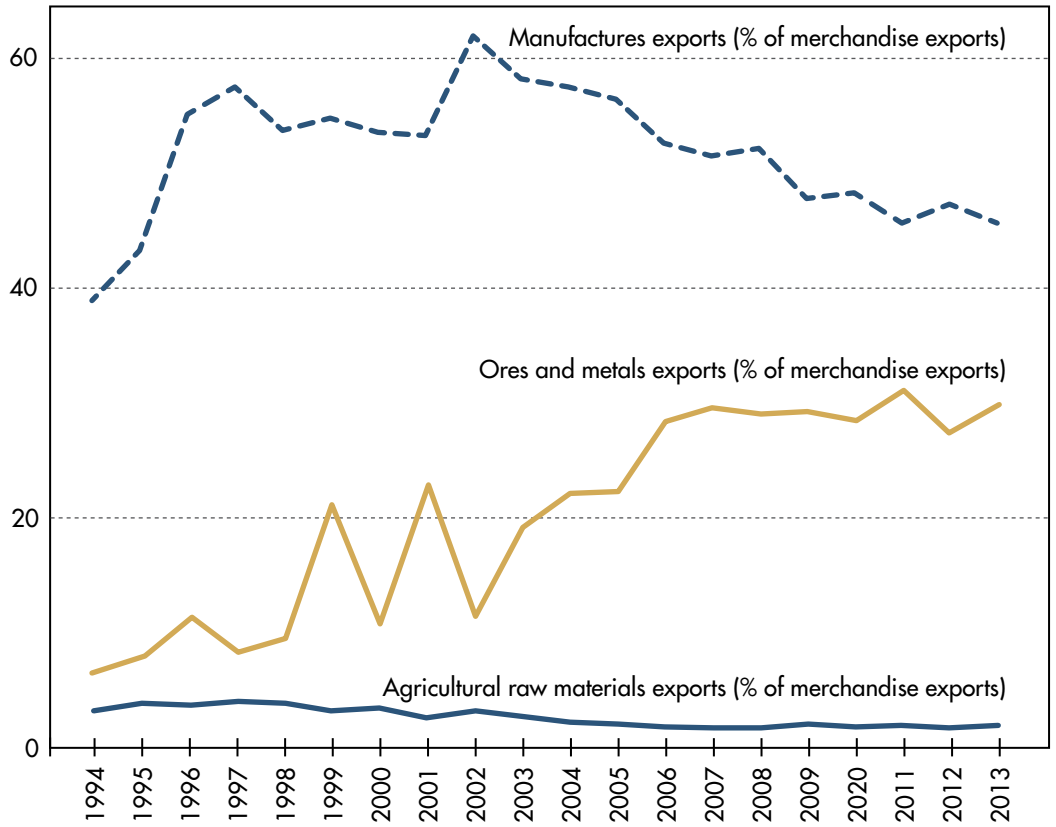
33 See Mehlum H, Moene K & R Torvik, 'Cursed by resources or institutions?', *The World Economy*, 29, 8, 2006, pp. 1117–1131; Harvey R, 'Natural resource rents and elite bargains in Africa: Exploring avenues for future research', *South African Journal of International Affairs*, 21, 2014, pp. 1–21.

34 Bundy C, 'The emergence and decline of a South African peasantry', *African Affairs*, 71, 285, 1972, pp. 369–388.

35 Nattrass N, 'Deconstructing profitability under apartheid: 1960–1989', *Economic History of Developing Regions*, 29, 2, 2014, p. 15 (emphasis in original).

36 *Ibid.*, p. 3.

**FIGURE 3** THE COMPOSITION OF SOUTH AFRICA'S EXPORTS, 1994–2013




Source: Author's compilation using World Bank, 'World Development Indicators', database, http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators, accessed 2 July 2015

Rodrik has argued that South Africa's high unemployment and low growth 'are both ultimately the result of the shrinkage of the non-mineral tradable sector since the early 1990s'.[37] Weak export-orientated manufacturing has deprived South Africa of growth opportunities that countries such as Malaysia have been able to exploit. Structural change in export composition since 1994 is important for explaining persistent unemployment, because the non-mineral tradable sector is relatively more intensive in unskilled labour than services (or mining, for that matter, especially as the latter becomes increasingly mechanised), and South Africa has a relative abundance of unskilled labour. This abundance is a partial function of the mining sector's historical role in excluding the

37 Rodrik D, 'Understanding South Africa's economic puzzles', *Economics of Transition*, 16, 4, 2008, p. 772.

majority of South Africans from earning market-related wages.[38] The overall effect is that manufacturing contraction depresses demand for relatively unskilled workers.

Figure 3 illustrates typical Dutch disease-type effects. The idea behind the Dutch disease theory is that natural resource exports drive up demand for the country's currency, inducing its appreciation. This renders the export of tradable products relatively cost uncompetitive, crowding out the manufacturing sector. Another important channel through which the disease may operate is to draw capital, labour and land away from manufacturing into the extractive industries.[39] Cross-country empirical evidence does suggest that 'exports of natural resources seem to crowd out non-resource exports at a rate of around 50 cents to the [US] dollar, while drawing in imports at around 15 cents to the dollar, the remaining 35 cents of revenue going to the capital account',[40] although this seems relevant only for countries that had a well-established manufacturing sector at the time of discovering mineral wealth.

In South Africa, since 1994 increasing ore and metal exports have been closely correlated with a contraction in manufacturing exports. However, the exchange rate – on average – has also depreciated significantly since 1994, which seems to exclude at least one channel of the Dutch disease explanation. Moreover, it does not appear to be the case that the minerals sector has drawn resources away from manufacturing. Historically, mining provided the impetus for manufacturing, a relatively anomalous phenomenon for developing resource-wealthy countries.

In accounting for the contraction of the manufacturing sector, and the associated decline in employment within that sector, Rodrik shows that 'import penetration' – price-competitive imports coming into South Africa as a result of decreased tariff barriers – 'enters [the regression] with a negative and statistically significant coefficient'.[41] In other words, competitive imports have had a negative impact on a manufacturing sector that was shielded from international competition – and often inefficiently subsidised – before 1994. Exchange rate effects also turned out to be significant in Rodrik's regressions, which suggest that real rand depreciation should have compensated for the import penetration effect to some degree. However, for a significant portion of the post-1994 period, the currency was arguably over-valued, which would have inhibited manufacturing export growth. The currency was probably over-valued as a function of both increased mineral exports and relatively high domestic interest rates. Either way, during the period of currency over-valuation, the country failed to take advantage of an import windfall to build physical infrastructure that could have supported manufacturing. The internal

38 Wilson F, 'Minerals and migrants: How the mining industry has shaped South Africa', *Daedalus*, 130, 1, 2001, pp. 99–121.

39 *The Economist*, 'What Dutch Disease is, and why it's bad', 5 November 2014, http://www.economist.com/blogs/economist-explains/2014/11/economist-explains-2, accessed 31 August.

40 Harding T & A Venables, 'Exports, imports and foreign exchange windfalls', unpublished manuscript, University of Oxford, 2011, p. 21.

41 Rodrik D, *op. cit.*, p. 792.

constraints mentioned earlier have also become more acute since 2008, explaining the remaining variation in reduced manufacturing profitability.[42]

Hausmann and Klinger show that South Africa has suffered poor export performance over the past 50 years because of 'lagging structural transformation: the process by which a country shifts its production from simple, poor-country goods to complex, rich-country goods'.[43] They note that this may be attributable to South Africa's status as a natural resource exporter, except that the country's performance is weak even when measured against that of other comparable resource-exporting countries such as Argentina and Malaysia. They write that 'this is not simply due to bad luck in international prices of South Africa's primary exports, as the country's relative performance in export volumes is equally poor'.[44] The only sectors with large net exports are gold, coal, platinum, and basic iron and steel. Manufacturing output is lower today than its levels in the 1970s. However, this lack of sophistication in South Africa's manufacturing export basket is not easily explained by resorting to the Dutch disease theory. Sophistication has improved in absolute terms, but has lagged relative to comparable developing countries. This lag has to be explained by country-specific effects.

Hausmann and Klinger argue that South Africa was characterised by fairly unique conditions, especially from 1985 to 2000.[45] This entailed the departure and return of significant capital, trade sanctions imposed and lifted, and political transition. Notwithstanding these factors, much of the slow pace of structural transformation can be explained by the fact that 'the country's export basket has historically been very poorly connected in the product space';[46] in other words, the sheer distinctiveness of mining in South Africa – advanced and at great depths – diminishes the transferability of both human and physical capital into other economic activities. Specialisation in deep-level gold mining, for instance, has meant that there are few 'nearby' products that require similar skills and infrastructure. 'Given the difficulty in coordinating the creation of capabilities for activities that do not yet exist, productive transformation tends to favour "nearby" goods, in other words goods that require capabilities that are similar to those that already exist in the country.'[47] Downstream beneficiation, as one policy option, would require the creation of products that use inputs from mining but require very different types of capital, and those goods would not be well connected in the product space either. For instance, gold jewellery (from gold) and steel (from iron ore and copper) require highly differentiated human and capital inputs.

Downstream beneficiation ... would require the creation of products that use inputs from mining but require very different types of capital

42 Hausmann R, *op. cit.*

43 Hausmann R & B Klinger, 'South Africa's export predicament', *Economics of Transition*, 16, 4, 2008, p. 610.

44 *Ibid.*, p. 612.

45 *Ibid.*

46 *Ibid.*, p. 626.

47 Hausmann R, Rodrik D & CF Sabel, 'Reconfiguring Industrial Policy: A Framework with an Application to South Africa', Center for International Development and Harvard Kennedy School Faculty Research, Working Paper Series, 168 and RWP08-031, June 2008, p. 3.

## CAN BENEFICIATION DIVERSIFY SOUTH AFRICA'S EXPORT BASKET?

Adding value to raw minerals and exports in advance of exporting them has long been proposed as a means of overcoming the perceived negative terms of trade associated with exporting unrefined raw material. If successful, it would ostensibly serve to diversify the export basket and increase the overall value of the country's export index. Globally, and at a continental level, the idea of adding downstream value to raw material has become deeply embedded in the development discourse, perhaps most strongly exemplified in the African Mining Vision articulated in 2009.[48]

One prominent South African academic argues that unless mineral assets are used as a lever to realise South Africa's development objectives, 'these wasting assets could be squandered under a "free mining" (first-come-first-served, with negligible developmental impacts) and a continued "free market" (non-interventionist) scenario, which is likely to leave South Africa with little more than ghost towns like Stilfontein and Welkom, with holes in the ground'.[49] This sentiment is consistent with the view that 'neoliberal' policies have somehow created an over-reliance on mining and are therefore to blame for an inadequately diversified downstream manufacturing base. The problem with this view is that it tends to read a preconceived ideological diagnosis into the data. Hard evidence that more free market-orientated policies have produced a lack of manufacturing diversification is not forthcoming. Correlation is not causation, and researchers struggle to corroborate the hypothesis after having controlled for constraints such as limited electricity supply, a relatively uneducated and under-skilled workforce, an inflexible labour and immigration regime, and other factors cited by Hausmann and Rodrik (referenced above). Policymakers should not ignore the proposition that the resources sector could play a stronger role in generating development benefit, but the idea that downstream processing is the best channel through which to achieve this remains unconvincing. Arguments in favour of beneficiation tend to appeal to the lower transport costs that would be achieved through geographic proximity to the raw material. However, 'there is very little empirical work that demonstrates the validity of these views and the policies to which they give rise'.[50] Hausmann, Klinger and Lawrence actually find, paradoxically, that the empirical evidence of the impact of forward linkages is weaker among goods with higher transportation costs; in other words, the transportation cost savings of local processing of raw materials is not a justification for beneficiation policies.[51]

The ruling party has consistently been in favour of downstream mineral beneficiation, or what Jourdan calls 'forward linkage industries': 'resources processing (value addition)

48 UN Economic Commission for Africa, 'Africa Mining Vision', http://www.africaminingvision.org, accessed 31 August 2015.

49 Jourdan P, 'The optimisation of the developmental impact of South Africa's mineral assets for building a democratic developmental state', *Mineral Economics*, 26, 2013, p. 109.

50 Hausmann R & B Klinger, *op. cit.*, p. 5.

51 Hausmann R, Klinger B & R Lawrence, 'Examining Beneficiation', Working Paper, 162. Cambridge, MA: CID (Center for International Development at Harvard University), May 2008.

into intermediate products, semi-manufactures, components, sub-assemblies and finished, resource-intensive products'.[52] The demands of the Freedom Charter of 1955 were reflected in the Reconstruction and Development Plan of 1994, which called for downstream mineral beneficiation. A State Intervention in the Minerals Sector (SIMS) Report of 2012[53] examined the options in this respect and endorsed such beneficiation. This was ultimately reflected in the 2013 amendments[54] to the Mineral and Petroleum Resources Development Act of 2000 (Act 28 of 2002, or the MPRDA). Amendments to section 26, for instance, called for the minister of mineral resources to 'promote the beneficiation of mineral resources in the Republic' and to 'designate any mineral or mineral product for local beneficiation', but only after taking into consideration national development imperatives. Most controversially, it stated that 'every producer of designated minerals must offer to local beneficiators a prescribed percentage of its production of minerals or mineral products in prescribed quantities, qualities and timelines at the mine gate or agreed price'.[55] In addition, the export of such designated minerals was to be prohibited unless the 'Minister's prior written approval' was attained. The Mineral and Petroleum Resources Development Amendment Bill (MPRD-AB, 2013) passed through Parliament in 2014 but has since been returned by the president on the grounds that this particular section was likely to violate World Trade Organization (WTO) prescripts.[56]

Critics assert that the MPRD-AB contains definitional ambiguity and excessive ministerial discretion. For instance, the legislation does not specify which minerals are to be designated as strategically valuable, or exactly what percentage of production will be required to remain in the domestic market. The precise definition of 'mine gate or agreed price' is also absent. Aside from the WTO difficulties that this creates, it also generates substantial investor uncertainty. In an industry currently experiencing a commodity price downturn, and increasingly expensive input and access costs, mining companies appear resentful of the government's apparent intention to force them to subsidise downstream manufacturing. It is also not clear that this is an economically more sensible plan than using the revenue generated from mining to invest in other activities that are less energy-intensive and potentially more labour-absorptive. Proponents of downstream beneficiation tend to blame weak manufacturing performance on mining companies' lack of willingness to supply beneficiators at 'agreed prices'. Hence, Jourdan writes that 'the stipulation of competitive pricing of all resource products is seminal to any successful forward linkages

In an industry currently experiencing a commodity price downturn ... mining companies appear resentful of the government's apparent intention to force them to subsidise downstream manufacturing

52 Jourdan P, *op. cit.*, p. 110.

53 ANC, *State Intervention in the Minerals Sector: Maximising the Developmental Impact of the People's Mineral Assets*, 2012, http://anc.org.za/docs/discus/2012/sims.pdf, accessed 31 August 2015.

54 Republic of South Africa, Mineral and Petroleum Resources Development Amendment Bill. Pretoria: Government Printer, 31 May 2013, http://www.gov.za/sites/www.gov.za/files/36523_gen567.pdf, accessed 31 August 2015.

55 *Ibid.*, p. 6.

56 Bello O & R Harvey, 'Will SA's minerals bill take the road less travelled?', *Business Day*, 10 February 2015, http://www.bdlive.co.za/opinion/2015/02/10/will-sas-minerals-bill-take-the-road-less-travelled, accessed 10 February 2015.

(downstream) strategy'.[57] He also argues that 'the resource contracts/licenses need to provide incentives/disincentives for mineral resources downstream beneficiation'.[58] However, it remains unclear why mining companies should be expected to take significant risk and invest large amounts of capital in long-lead-time projects if they are going to be expected to provide an unspecified share of production at undefined (lower) prices at some point in the future.

Jourdan and others of the MEC predisposition are encouraged by 'the increasing success and importance of China and other Asian economies in the global balance of power and economic strategies'.[59] However, this tends to ignore the awkward fact that, perhaps more than any other single factor, excess beneficiation supply capacity in China compresses the potential margins available to African downstream producers, especially for base metals.[60] Price distortion induced by the Chinese state's subsidisation of this capacity is the very thing that is contributing to South Africa's lack of beneficiation potential. It therefore seems implausible to blame 'predatory' pricing by mining conglomerates within South Africa, especially in the context of regulatory instability that inhibits investment in the sector.[61]

None of the arguments questioning downstream beneficiation strategies suggests, however, that mineral rents have been optimally employed in South Africa. The World Bank, in an effort to measure the value of natural resources more reliably, reported that 'for countries dependent on non-renewable natural capital, transforming it into other forms of wealth is the path to sustainable development'.[62] In other words, if the rents from these resources are directed towards consumption (to extend patronage networks, for instance) rather than investment in more sustainable forms of capital, a country is liable to become unsustainable. It must be acknowledged that, historically, South Africa has not optimised its mineral rents for inclusive development.

The World Bank indicates that had South Africa followed the Hartwick rule – the reinvestment of mineral rents into 'produced' capital (eg, infrastructure and knowledge) required to offset declining stocks of finite resources – the value of produced capital could have been 220% higher than it is at present.[63] Unfortunately, especially during the 1980s, those rents were spent on apartheid political projects that led to capital emigration from South Africa, undermining general economic profitability and bankrupting the fiscus. On this reckoning, South Africa has underperformed both Zambia and Argentina, among a handful of other comparable countries.

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57 Jourdan P, *op. cit.*, p. 110.

58 *Ibid.*, p. 116.

59 *Ibid.*, p. 113.

60 Grynberg R, 'Case Studies in Base Metal Processing and Beneficiation: Lessons from East Asia and the SADC Region', forthcoming research report. Johannesburg: SAIIA, 2015.

61 Wilson A, McMahon F & K Green, *Survey of Mining Companies 2012/2013*. Vancouver: Fraser Institute: Canada, 2013.

62 World Bank, *The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium*. Washington, DC: World Bank, 2011, http://siteresources.worldbank.org/ENVIRONMENT/Resources/ChangingWealthNations.pdf, accessed 31 March 2015.

63 *Ibid.*

Reinvesting rents into produced capital is not synonymous with downstream beneficiation or even with developing complex, resource-linked industrial clusters. Developing upstream and horizontally linked activities to the mining sector may be *part* of investing in produced capital. Whether or not the allocation of capital in this direction is efficient depends on overcoming co-ordination failures between the private sector and the state. In the case of South Africa there remains 'too much disconnect between the private sector and the government, information does not flow adequately, needs are not well-identified, policy instruments are not appropriately targeted, and self-correction mechanisms are not in place'.[64]

Renewed focus on beneficiation appears to be a kind of return to the future, with the post-colonial nationalisation efforts of the 1960s reappearing in new clothing. A recurrent argument is that forward linkages failed to develop because of colonialism's exploitation of raw materials without opportunities for local processing. However, 'the small impact of linkages is as true for industrialised countries as it is for developing countries'.[65] One recent paper goes so far as to call demands for beneficiation 'the other resource curse', defined as 'the prevailing assumption that natural resources can easily be monetized to generate public goods and leveraged for industrial transformation'.[66] It argues that the assumption itself underpins recurring policy disappointments, and that stakeholders require a more comprehensive understanding of the limitations constraining extractive industries' ability to create economic linkages. In South Africa especially there is a view that geology alone can be harnessed to drive economic development via structural industrial transformation. Jourdan has offered a number of recommendations in this respect that seem to have gained prominence, appearing in both the SIMS 2012 document[67] and the 2013 MPRD-AB.[68] They reflect the school of thought that calls for minerals to make a greater development impact and are therefore worth addressing in turn.

Renewed focus on beneficiation appears to be a kind of return to the future, with the post-colonial nationalisation efforts of the 1960s reappearing in new clothing

First, amending the MPRDA to make optimisation of the developmental impact of minerals an explicit objective of minerals legislation is acceptable in principle. However, permitting the minister to make mining licence allocations conditional on having sufficiently transferred technology and developed 'linkages into the local and regional economy'[69] contains all the ingredients of protracted legal disputes that neither the industry nor the government can afford. For instance, how would sufficiency be measured in a way that satisfies all shareholders? It is considerably challenging to legislate a definition of these terms that is clear and predictable to all stakeholders over a long time horizon. Without such clarity, investment flows will slow.

64 Hausmann R, Rodrik D & CF Sabel, *op. cit.*, p. 12.

65 *Ibid.*, p. 5.

66 Roberts CW, 'The other resource curse: Extractives as development panacea', *Cambridge Review of International Affairs*, 28, 2, 2015, p. 285.

67 ANC, *State Intervention in the Minerals Sector*, *op. cit.*

68 Republic of South Africa, Mineral and Petroleum Resources Development Amendment Bill, *op. cit.*

69 Jourdan P, *op. cit.*, p. 122.

Second, drawing on Jourdan's recommendation to impose a 'freeze on all new exploration licences until the [Council for Geosciences] CGS confirms that the terrain has no known minerals assets/assemblages and no strategic minerals required by the state',[70] the MPRD-AB now contains this precise wording. No costing is provided for this recommendation, and South Africa can ill afford a freeze on new exploration activity. The CGS, a sub-department of the Department of Mineral Resources (DMR), is perennially underfunded and lacks the resources to carry out such an enormous undertaking. Therefore, prospecting risk remains with the private sector, which will not invest unless the potential return compensates for that risk. The state has not had to resort to freezing prospecting; prospecting has frozen because of the lack of clarity pertaining both to how licences will be allocated (if at all) and what proportion of production will have to remain in the country if mining actually did commence.

Third, the imposition of a 'use-it-or-lose-it' regime with regard to prospecting rights assumes that it is necessarily economical to mine a resource immediately upon discovery. However, if, for instance, production on all proven and economically viable iron ore reserves were to commence today, the supply glut would pressurise an already depressed price further downwards. Moreover, the associated idea of taxing prospectors that sell their deposits before starting a mine is akin to destroying the incentives for prospecting. The economic rationale for prospecting is to establish whether a resource is economically viable to extract. Roberts forcefully argues that 'if any jurisdiction seeks to maximise the long-term value of its extractive potential, regulatory frameworks that promote wide-scale exploration and production *over time* are required'.[71]

Fourth is the idea that resource concessions should be auctioned instead of being granted to applicants on a first-in-first-assessed principle. Auctioning would ostensibly 'optimise the developmental impact of the concessions', but a research paper by the South African Institute of International Affairs has shown that auctions entail high transaction costs and require the state to possess significant geo-scientific data[72] if they are to be effective. The DMR does not possess the resources or capacity to follow this approach. An auction-based approach attempts to maximise rents to the state before exploration even begins, which is likely to 'keep the sector small by milking every viable operation and dissuading others from investing'.[73] Moreover, the MPRD-AB, in respect of how licences will be allocated, is confusing. In section 5 (replacing the old section 9) the minister is granted the discretion to invite applicants to apply for a licence. Criteria by which the invited application will subsequently be evaluated are not stipulated at all.

Fifth, Jourdan recommended 'export tariffs on unprocessed minerals where there is a viable case for further beneficiation'.[74] This is reflected in section 26 of the MPRD-AB.

70 *Ibid.*, p. 123.

71 Roberts CW, *op. cit.*, p. 289 (emphasis in original).

72 Bello O, Benkenstein A & R Harvey, 'Assessing Competitive Resource Tenders as an Option for Mining Rights Allocation in South Africa', Occasional Paper, 52. Johannesburg: SAIIA, 2013.

73 Roberts CW, *op. cit.*, p. 289.

74 Jourdan P, *op. cit.*, p. 123.

Holders of mineral concessions should further be obliged to 'sell all products into the domestic market at competitive (export parity) prices'.[75] Aside from the problem that not all minerals are equally amenable to profitable beneficiation,[76] this recommendation assumes that mining is an endlessly profitable undertaking. Under conditions of depressed commodity prices, with little indication of recovery in the near to medium term, combined with industrial action and unreliable electricity supply, beneficiation-encouraging policies may become an inadvertent disincentive to mine at all. This would be a tragedy for the economy, as mining still employs over half a million people directly. In a context of high unemployment, the significance of this fact cannot be overstated. Moreover, given a narrow tax base, mining's contribution of ZAR 6.42 billion ($488.5 million) in 2013/14 and corporate tax of ZAR 20.6 billion ($1.56 billion) in the same year is substantial.

To expect global mining companies to subsidise downstream manufacturing is economically inefficient and resembles the failed import-substitution-industrialisation plans of the post-independence era. It is not clear that enough has changed since the 1960s to warrant the renewed impetus for beneficiation. For instance, Jourdan is willing to recreate state utilities from the pre-1994 era to supply feedstocks for manufacturing at low costs. However, the poor performance of South African state-owned enterprises (SOEs) (with the exception of the Industrial Development Corporation) since 1994 suffices as an argument against this tactic. 'Countries have to avoid the mistakes of the recent past; many extractive SOEs became a revenue drain on governments rather than a revenue generator.'[77] In the midst of Jourdan's recommendation, however, is a useful line: 'Consider the efficacy of a system of varying royalties for each mineral that decrease with increasing value-addition, to encourage beneficiation.'[78] This is a market-based solution that could yield development benefits. However, it would only be likely to succeed in the absence of the other price-distorting measures favoured by many beneficiation proponents. It would allow companies (the risk-takers) to self-select in assessing whether the decreased royalties constitute a sufficient incentive to sell to local beneficiators at lower prices than what they could earn globally.

To expect global mining companies to subsidise downstream manufacturing is economically inefficient

In the light of this discussion, South African policymakers should bear in mind four important things. First, as Roberts explains, 'Geology is just one component of a larger risk equation that determines whether specific mineral occurrences are economically feasible to develop.'[79] Second, as Rodrik argues, what is required is 'greater discipline in targeting policy interventions on plausible, identified sources of market failures instead of on vague, and economically meaningless objectives (such as greater domestic "beneficiation" or higher value added)'.[80] Third, minerals will remain a mere raw export unless a better institutional structure is designed to ensure stronger political leadership and co-ordination at the elite level, and strategic collaboration at the bottom with business

75 *Ibid.*
76 Roberts CW, *op. cit.*, p. 293.
77 *Ibid.*, p. 303.
78 Jourdan P, *op. cit.*, p. 123.
79 Roberts CW, *op. cit.*, p. 288.
80 Rodrik D, *op. cit.*, p. 796.

and other stakeholders. Finally, 'downstream advanced processing and beneficiation of extractives often involves greater environmental, and other, adverse consequences than do basic production and processing operations'.[81]

In 2007 a Harvard group of economists evaluated South Africa's prospects for economic diversification, focusing on, among other things, calls for beneficiation. They concluded that[82]

> [b]eneficiation, in the sense of incentivising the domestic processing of natural resources, is not a sensible policy. The capabilities developed through mining can be exploited in a number of different ways, but these potential developments are only accidentally connected to the further processing of ores and minerals. For example, the skills involved in cutting and polishing diamonds and in the jewellery industry are quite different from those involved in mining diamond ore. Meanwhile, the needs of mining generate a host of skills and capabilities in the design and production of high performance pumps and valves and other capital equipment for the mining industry. These capacities can be further applied and developed not only in mining but also in many other industries worldwide. A policy focused on beneficiation has such a narrow focus that it tends to encourage the wrong activities and generates inefficiency.

This again suggests that upstream linkages may offer a more appropriate space for partnership between the public and private sectors. Developing capital equipment inputs for mining makes sense in terms of South Africa's product space, combined with the benefit that beyond the life of mining, these products could potentially be transposed into inputs to other sectors. Jourdan notes that 'the resources sector market (inputs to mining and beneficiation) should be used to develop the resource supply/inputs sector (capital goods, consumables, services)'.[83] Across the southern African region, a relatively large market for resource exploitation input exists. These inputs are not as differentiated as the inputs required for downstream products. The flat-reef platinum group metal seams in the Bushveld Igneous Complex, for instance, offer opportunities for increased mechanisation, especially low-profile load-haul-dump vehicles. 'However, the requisite capital goods will predominantly be supplied by imports due to the failure of South Africa to invest in the development of trackless mining equipment.'[84] Jourdan attributes this reliance on foreign imports to a change in focus from South African mining houses, many of which have listed on foreign securities exchanges. As a remedy for this perceived injustice, he suggests that local content milestones should be built into resource contracts or licences. However, the nature of local content quality or availability is difficult to determine in advance, and such milestones may therefore be unrealistic. A more compelling regulatory investment would be into product development that equips extractive industry companies to mine differing reefs and ore bodies with flexible and adaptive technologies. Technology-focused investment in research and development 'has the capacity to later "reinvent" itself outside the resources sector through the lateral migration of technological competencies

81 Roberts CW, *op. cit.*, p. 291.
82 Hausmann R, Rodrik D & CF Sabel, *op. cit.*, p. 16.
83 Jourdan P, *op. cit.*, p. 116.
84 *Ibid.*

to produce new products for other (non-resource) markets'.[85] The development of technology-laden capital equipment as inputs to the extractive industries is a sound policy imperative, as it is also likely to spur the growth of inputs into other sectors. This is far more likely to push South Africa into a more sophisticated product space that will improve both the diversity and the quality of the country's export basket.

The development of technology-laden capital equipment as inputs to the extractive industries is a sound policy imperative

Those with a narrow focus on downstream beneficiation should note that the costs 'are likely to be measured less in the poor investments it compels in than in the opportunities it obscures'.[86] These opportunities are largely upstream.

Eight years after this Harvard group had written up its findings, mining policy paralysis persists, in addition to incoherence between mining and other overarching policies such as the NDP, which is less interventionist than its previous counterpart, the New Growth Path. The NDP calls for increased policy clarity and minimal ministerial discretion in mining legislation, which appears to have been ignored. In policymaking circles, a perception persists that because South Africa's natural resource endowment is significant, value created in mineral beneficiation is necessarily likely to have a greater welfare impact than adding value in other tradable sectors (which may well be more labour intensive and less energy intensive than mineral beneficiation). For instance, the dti's National Industrial Policy Framework, 2006, proclaims that 'the promotion of beneficiation of raw materials in downstream sectors is a logical progression to complete various value chains in the South African economy'.[87] However, the empirical evidence does not support this view, and in the case of South Africa the regression results 'clearly show that beneficiation is the wrong approach'.[88] Forward linkages have an extremely small impact on which sectors are likely to emerge as export successes in a country, despite 'the fact that our data sources are biased against finding significant effects of factor intensities and towards finding significant effects of forward linkages'.[89] What accounts for South Africa's continued policy confusion, and how can history explain current institutional choices?

## HISTORICAL ROLE OF MINERAL RENTS IN SHAPING SOUTH AFRICA

'What is so interesting and painful about [South Africa's] development is the extent to which the very processes that generated wealth in the economy simultaneously produced poverty and patterns of unemployment that still hobble South Africa as it struggles to democratise in the twenty-first century.'[90] Mining powered the country's (limited) industrialisation. Despite this, mineral rents have not been adequately invested in human and physical capital formation, a prerequisite for growth in the tradable sectors. Mining produced an underclass of cheap labour that both kept the domestic market artificially small and created an uneducated workforce. Through the imposition of a 'colour bar'

85 *Ibid.*, pp. 116–17.
86 Hausmann R, Rodrik D & CF Sabel, *op. cit.*, pp. 16–17.
87 Cited in Hausmann R, Klinger B & R Lawrence, *op. cit.*, p. 4.
88 *Ibid.*, p. 5.
89 *Ibid.*, p. 21.
90 Wilson F, *op. cit.*, p. 103.

on the mines, black labourers were excluded from managerial positions, reducing their potential purchasing power substantially. By the time the miner's strike of 1922 occurred, it was clear that mining capital owners saw the need for encouraging black labour to be better skilled and remunerated. However, the government endeavoured, against the logic of economic efficiency, to protect white blue-collar labour.[91] These dynamics interacted more generally with apartheid's most pernicious piece of legislation, the Bantu Education Act of 1953, which provided menial education to black children, failing to equip them with the skills necessary to compete in an industrialising economy.[92] By the time manufacturing exceeded mining's contribution to GDP (in the 1960s) the seeds of its destruction had already been sown.

The discovery of mineral wealth in the late 1800s created a shift in British colonial strategy from promoting a class of African farmers to forcing them to become wage labourers. This was legislated after the Union of the Republic (1908) in the 1913 and 1936 natives land acts, which forbade black Africans from owning land outside the 7% and then 13% that had been allocated as 'reserves'. As a result, 'subsistence farming never took root in the former reserves. It crumbled mainly due to overcrowding and the fact that men were forced to be migrant workers. At the dawn of democracy, state social grants were the dominant source of rural existence.'[93] The apartheid government's attempts at establishing smallholder agriculture schemes in the 'Bantustans' failed dismally, along with a number of large schemes over 500 hectares.[94]

Instead of providing broad-based property rights, the ruling elite – beginning in the late 1800s – effectively manipulated economic institutions (forced African farmers to become wage labourers) through the political system (pass laws and the Natives Land Act) to ensure the acquisition of mineral rents for themselves. As Lipton recently put it, 'while mine-owners opposed the job bar, which raised their skilled labour costs, they supported the racist land acts and movement controls, which increased their supply of cheap unskilled labour (although this raised costs for employers in manufacturing and commerce)'.[95] Consequently, the former homelands of Ciskei, Transkei and KwaZulu remain among the most impoverished areas of South Africa.[96]

This change in colonial strategy (from providing some form of secure tenure for African farmers towards forcing them to work on the mines) strengthened the hand of rural chiefs,

91 Nattrass N, *op. cit*.

92 Christie P & C Collins, 'Bantu education: Apartheid ideology or labour reproduction?', *Comparative Education*, 18, 1, 1982, pp. 59–75.

93 Ntsebeza L, 'Land-reform politics in South Africa's countryside', *Peace Review: A Journal of Social Justice*, 19, 1, 2007, p. 34.

94 Cousins B, 'Smallholder irrigation schemes, agrarian reform and "accumulation from above and from below" in South Africa', *Journal of Agrarian Change*, 13, 1, 2013, pp. 116–139.

95 Lipton M, 'Is South Africa's constitutional democracy being consolidated or eroded?', *South African Journal of International Affairs*, 21, 1, 2014, p. 4.

96 Leibbrandt M, Woolard C & I Woolard, 'The contribution of income components to income inequality in the rural former homelands of South Africa: A decomposable Gini analysis', *Journal of African Economies*, 9,1, 2000, pp. 79–99.

who would later become co-opted into doing the bidding of the apartheid government. These dynamics remain today.

As a means of securing the rural vote, the incumbent ANC struck a deal with traditional authorities between 1990 and 1994. 'For its part, the ANC had an interest in wooing chiefs to its side in order to prevent the emergence of a conservative alliance where traditional leaders could join forces with the Bantustan elites.'[97] Mineral rents animate the dynamics of this bargain. Traditional leaders were once maligned as puppets of grand apartheid, but managed to reposition themselves strategically as politically legitimate rent beneficiaries, especially in the case of the Bafokeng.[98]

## ELITE INSIDERS AND THE LACK OF PRO-POOR GROWTH

Since 2004, the MPRDA and its subsequent iterations have interacted with a raft of legislation pertaining to traditional leadership to govern land held in communal trusts on the platinum belt. Claassens and Boyle contend that the Traditional Leadership and Governance Framework Act of 2003 (Act 41 of 2003) and its provincial counterpart, the North West Traditional Leadership and Governance Act of 2005 (Act 2 of 2005), 'do not adequately capture the inherently participatory features of customary systems'.[99] Instead, they adopt the tribal boundaries inherited from the Bantu Authorities Act of 1951 (Act 68 of 1951) and re-legitimise the official status of chiefs from the apartheid era. The MPRDA, in item 11 of schedule II (governing the transitional arrangements for converting old order rights to new order rights), provides for the continuation of all existing production-based royalties payable to rural communities. These royalty payments were originally designed to recognise black people's historical ownership of land. Conversion of old to new order rights, however, required compliance with the Mining Charter. A critical component of BEE, this charter imposed a deadline of 31 December 2014 by which mining companies had to show at least 26% ownership by historically disadvantaged South Africans. In an effort to meet the deadline, some companies pressed communities entitled to royalty payments to trade those rights for an ownership share. In many areas 'the reinforced power of the chiefs is being interpreted as giving them the right to convert these surviving mining royalties into shares held by traditional authorities, without their having to consult communities'.[100] Traditional leaders are included in the distribution of equity-based revenue such as dividends. There is little to suggest that this revenue

97 Van Kessel I & B Oomen, '"One chief, one vote": The revival of traditional authorities in post-apartheid South Africa', *African Affairs*, 96, 1997, p. 561.

98 Manson A, 'Mining and "traditional communities" in South Africa's "Platinum Belt": Contestations over land, leadership and assets in North-West Province c. 1996–2012', *Journal of Southern African Studies*, 39, 2013, pp. 409–423.

99 Claassens A & B Boyle, 'A Promise Betrayed: Policies and Practice Renew the Rural Dispossession of Land, Rights and Prospects', Policy Briefing, 124. Johannesburg: SAIIA, 2015, p. 2.

100 *Ibid.*, p. 3.

reaches the communities for whom it is intended, and it creates extensive opportunities for misappropriation and corruption:[101]

> Sharing the benefits of mining with local communities through their 'Traditional Authorities', though royalties, shares or employment, is at best precarious and at worst disastrous. Every ethnic group holding mineral assets in the platinum mining fields of the [North West] province has experienced some form of economic or political turmoil … This also casts a dark shadow over the conceptualisation and implementation of what appears still to be an essential component of the ANC's new mining policy. Nevertheless, for as long as traditional governance remains a cornerstone of state administration and the idea that local ethnic communities should be the direct recipients of income from mining operations carries both ideological appeal and legal justification, this troubled situation is likely to persist.

Mineral rents not only benefit traditional authorities at the expense of communities, they also benefit politically connected insiders through BEE deals.[102] This is not to say that BEE is exclusively a rent-seeking vehicle, as it has also produced enormous broad-based benefit.[103] Nonetheless, both forms of rent generation and distribution are engineered through the MPRDA. This contemporary elite bargain goes some way to explaining mining's continued role in the lack of pro-poor growth in South Africa.

## CONCLUSION

This paper has explored potential explanations for South Africa's economic underperformance since 1994. The democratic dividend has produced some level of macroeconomic stability, but large fault lines have emerged, especially since the 2008 financial crisis. A brief study of the composition of the country's export basket reveals Dutch disease-type effects, although that model is inadequate for explaining weak manufacturing performance. The latter is more likely a function of import penetration and South Africa's weak position in the product space, which is partially attributable to the path-dependent effects of historical mining specialisation. Given mining's continued importance to the economy, the paper asked whether mineral resources could be better leveraged for inclusive development. This involved a detailed analysis of the demands for downstream beneficiation, and concluded that a focus on building upstream linkages was likely to yield greater benefit. Current institutional choices made by the ruling elite, reflected in mining legislation, traditional leadership laws and industrial policy, are evidently a function of history. However, the incoherence between these three institutional areas and the overarching NDP (that is meant to guide all economic policymaking) reveals a contradiction in the centre of the ruling coalition.

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101 Manson A, *op. cit.*, p. 422.

102 Harvey R, 'Between a rock and a hard place: State–business relations in the mining sector', in Pillay D & R Southall (eds.), *New South Africa Review 5: New Political Directions?* Johannesburg: Wits University Press, pp. 86–103.

103 Theobald S *et al.*, *The Value of BEE Deals: A Study of the Total Value Created for Beneficiaries Through BEE Deals Conducted by the 100 Largest Companies on the JSE*. Johannesburg: Intellidex, 2015.

On the one hand, continued rent generation for politically connected elite insiders depends on the success of the mining industry. On the other hand, mining and industrial policy seeks to place an onerous burden on mining companies to subsidise downstream beneficiation at the expense of potential upstream opportunities. The resultant policy instability has had a chilling effect on new exploration investment in South Africa. This narrative is, of course, incomplete, as other roadblocks to development have relatively little to do with mining and its relationship with other economic sectors. Economically inefficient visa regulations, electricity shortages and a general lack of policy clarity all contribute to South Africa's weak economic performance. Mineral rents could provide the impetus for upstream technology and product development, but the mining industry has to be allowed to grow first. Allowing freer movement of skilled labour (and tourists), addressing power constraints and attaining policy coherence would attract the growth-inducing investment that is required in mining, as well as the other economic sectors.

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