

Rent, Ethnicity, Ideology and Political Incentives: Explaining Rent Cycling in Algeria, Nigeria and Indonesia*

Abstract

Recent research suggests weak institutions are a leading cause of the under-performance of high-rent developing economies. But in *low-income* economies, institutions reflect political incentives rather than mould them so this paper focuses on how political incentives are shaped. The paper draws upon rent cycling theory, which basically posits that: (i) high rent diverts government incentives from wealth creation into patronage distribution that causes growth to collapse; (ii) recovery from a collapse is protracted due to the inertia of rent cycling; and (iii) the negative effects of high rent are amplified when rent is concentrated on governments or associated with ethnic diversity. This paper uses case studies to trace rent cycling, which statistical studies treat as a black box. It employs Indonesia's success rent cycling since 1967 as a counter-factual to help explain Nigerian and Algerian failure. Viewed from the perspective of rent cycling theory, initial prospects were: least propitious for Nigeria due to expanding oil reserves and high ethnicity; more favourable for Algeria, which combined lower ethnicity with expanding reserves; and equivocal in Indonesia where ethnic diversity countered the wealth creating incentive conferred by depleting oil reserves. The paper attributes Indonesia's success to the incentives from resource depletion overriding those from ethnic dissent. In contrast, Nigeria deployed its expanding oil rent to appease ethnic elites at the cost of macro policy cohesion. But contrary to rent cycling theory, Algeria initially espoused wealth creation. Its subsequent growth collapse resulted from an ideology-driven state-led industrialization strategy, which boosted unemployment, debt and social tension. Market repression is the root cause of the rent curse and statist credos do just that, so rent cycling theory should incorporate ideology. The paper also identifies from the case studies four necessary policies for effective rent deployment and proposes a dual track strategy to overcome rent seeking inertia and revive distorted economies.

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Professor Richard M. Auty
Lancaster University
Lancaster LA1 4YB UK
Phone: 0044-1524-593751
Fax: 0044-1524-847099
e-mail: r.auty@lancaster.ac.uk

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1. Introduction

After more than a decade of statistical research, explanations for the resource curse and even its very existence remain contested (Lederman and Maloney 2007). Sachs and Warner (1995 and 1999, 23) identify Dutch disease effects as the driver of the curse. They find that natural resource-rich governments close trade policy as their dependence on primary product exports increases in order to counter the employment-diminishing effects of Dutch disease. Lal and Myint (1996) demonstrate that such protection represses markets, distorts the economy and triggers a growth collapse. However, Acemoglu et al. (2001, 2002) find the quality of institutions to be more important than natural resources *per se*. Subsequently, Glaeser et al. (2004) relegate institutions to secondary status because institutions improve as a consequence of rising incomes but they are not the cause of that rise, which instead lies in human capital and policy choice. But research to date has tended to ignore or else under-rate the role of political incentives (van de Ploeg and Poelhekke 2007), which are the focus of this paper.

The conflicting findings from regression analysis indicate diminishing returns (Auty 2007b, Rodriguez 2007). Comparative case studies can help surmount the current impasse by tracing rent flows and their impact, rather than treating rent flows as a black box, as most statistical analysis does. Case studies are usefully informed by rent cycling theory, which as Section 2 explains, integrates many aspects of the rent curse literature. It focuses on how the scale of the rent affects government incentives and also the economic trajectory in the presence of differences in commodity linkages and ethnic diversity (Auty 2007a). Basically, the theory argues that: (i) high rent deflects government incentives towards rent distribution at the expense of wealth creation, which distorts the economy, retards institution building and risks a growth collapse; (ii) rent cycling exhibits strong inertia so recovery from growth collapses is protracted; and (iii) the negative rent effect is amplified by concentrated commodity linkages and ethnic factionalism. This paper identifies ideology as a third factor amplifying the negative rent effect, which like the other two triggers market repression that is the root of the resource curse. Rent cycling theory recognises that the resource curse can be avoided and also that it can be caused by foreign aid (conceptualised as geopolitical rent) and by contrived, or regulatory rent (Tollison 1983) as well as by natural resource rent. Crowson (personal communication) correctly argues that the three 'rent' streams are more accurately defined as supernumerary government revenue, i.e. revenue in excess of normal levels. But even the acronym SPR is cumbersome so 'rent' is used in this sense throughout this paper.

Specifically, this paper explains the disappointing Nigerian and Algerian rent cycling outcomes since the 1960s by taking Indonesia's welfare-enhancing oil rent deployment as a best practice comparator. Rent cycling theory suggests that initial development prospects varied, being: least propitious for Nigeria due to expanding oil reserves and high ethnicity; more favourable for Algeria, which combined expanding reserves with lower ethnicity; and finely balanced in Indonesia where shrinking oil rent favoured wealth creation but ethnic diversity did not. It proceeds as follows: Section 2 outlines rent cycling theory. Section 3 compares initial conditions in the early-1970s for the three countries and estimates subsequent fluctuations in government rent streams. Section 4 identifies three reasons for Indonesian success, and provides a counterfactual for analysing Algeria and Nigeria in Sections 5 and 6, respectively. Section 7 draws the implications for policy and theory.

2. Government Revenue, Political Incentives and Economic Outcomes

Rent-cycling theory (see Auty 2007a for a fuller description) is premised on the observation that low rent confers incentives to create wealth because governments in low-rent economies expand their revenue by taxing an increasing output. This has two basic consequences. First, it encourages governments to invest in public goods and maintain efficiency incentives. Second, these incentives foster reliance on markets and adherence to comparative advantage,

which for low-rent economies lies in labour-intensive manufactured exports. Early competitive industrialisation eliminates surplus rural labour causing real wages to rise and investment to diversify into skill-intensive and capital-intensive manufacturing. It also brings early urbanisation and consequently rapid passage through the demographic cycle, which raises the share of saving and investment in GDP. The higher investment is also efficient because the economy is open to competition, so it drives rapid PCGDP growth. Finally, high growth strengthens three key sanctions against anti-social governance to promote incremental democratisation as (i) entrepreneurs protect their investment by lobbying for property rights and the rule of law; (ii) unsubsidised urbanisation strengthens civic voice; and (iii) early government reliance on taxing income, profits and spending rather than trade spurs demand for accountable public finances.

In contrast to the virtuous low-rent trajectory, high rent deflects political incentives from wealth creation into rent distribution, which confers more immediate returns. Consequently, more rent cycles through patronage channels and less through markets in high-rent economies. This cumulatively deflects the economy from its comparative advantage, reduces investment efficiency and slows economic growth, presaging a growth collapse in the absence of reform. The high-rent economy also omits the labour-absorbing stage of the low-rent competitive industrialisation model so surplus labour persists and amplifies income inequality, reinforcing government motives to use rent to expand jobs that markets would not support in protected manufacturing and government bureaucracy. The size of this expanding rent-dependent sector eventually outstrips the rent because commodity prices fall or else long-term structural change shrinks the relative size of the primary sector. Yet rent-recipients resist economic reform because it extends markets that shrink rent extracting opportunities. Governments therefore find it politically easier to extract the returns to capital and labour from the primary sector as well as rent. This creates a staple trap of growing dependence upon a weakening primary sector. Finally, the staple trap also retards political maturation by undermining all three sanctions against anti-social governance as: firms secure higher returns from lobbying for rent than from boosting efficiency and pressing for the rule of law¹; rent cycling feeds a dependent social capital that relies on state favours; and commodity rent substitutes for personal taxation, blunting demands for public accountability.

By impeding reform, the inertia of rent cycling causes a growth collapse and it also retards recovery. This is so even though rent cycling theory suggests that a collapse will eventually strengthen the political incentives to create wealth because a collapse arrests passage through the demographic cycle so that rapid population growth shrinks the per capita rent. Such conditions normally elicit inflows of geopolitical rent (aid) that can perpetuate rent-seeking and delay recovery unless they are carefully targeted. Sachs' (2000) 'Malthusian trap' set of countries reflects this combination of negative income growth and rising population, which risks degenerating into civil strife if rival elite factions resort to force in order to contest control of the dwindling sources of rent.

Basically, growth collapses result from the repression of markets due to the pursuit of political aims at the expense of economic ones. Rent cycling theory shows how commodity linkages and ethnicity can amplify market repression. First, the 'curse' is most strongly associated with mineral-driven development, and especially oil. Oil's unusually capital-intensity renders investment lumpy, which not only amplifies price volatility compared with soft commodities and complicates rent management but it also concentrates the main domestic economic stimulus/linkages on taxes that accrue to governments. The empirical literature shows that when revenue is concentrated on governments it is deployed less effectively than when it is diffused through many domestic economic agents, as with peasant

¹ Congden Force and Olsson (2007) model how high rent motivates elites to extract rent by weakening property rights while low rent strengthens property rights to foster wealth creation.

cash crop farming (Baldwin 1956, Collier and Gunning 1999). Second ethnicity amplifies the rent effect by fostering patronage. Bridgman (2008) identifies a strong statistical link between low growth in ethnically diverse economies and redistributive pressure that deflects resources from welfare enhancing activity. Montalvo and Reynal-Querol (2005, 294) find that ethnicity is negatively associated with the rate of investment, the rate of economic growth and the quality of government. Sala-y-Martin and Subramanian (2003) find that ethnically-driven rent-seeking adversely impacts development by corroding institutions. Finally, van de Walle (2001) argues with reference to Africa that newly independent elites preserve a shallow-rooted political unity by eschewing arms-length formal institutions bequeathed by colonialism in favour of patrimonial ties rooted in ethnicity and a semi-subsistent rural society.

This paper argues that statist ideology is a third variable that amplifies the adverse effects of rent. It does so by increasing scope for governments to override markets and extract rent. Van der Walle notes that statist ideology outstrips government implementation capacity and also centralises authority, which in sub-Saharan Africa is inadequately constrained due to the under-developed nature of the private sector and civil society. Bates (2008) traces how African governments have used statist policies to benefit urban coalitions of industrialists, unions and bureaucrats (including the army) at the expense of the rural community, and ultimately, as the staple trap model explains, of long-term growth. He also notes that the inertia of statist policies was partly sustained by geopolitical rent from the Soviet bloc.

3. Initial Conditions and Subsequent Revenue Fluctuations

This section summarises initial conditions in the early-1970s in the three case countries and estimates subsequent change in the rent streams.

3.1 Initial Conditions

On the eve of the oil shocks the oil reserves of Nigeria and Algeria exceeded those of Indonesia, a mature oil province whose government anticipated declining oil reserves (Gelb and Associates 1988). Table 1 shows that during 1970-74 oil generated natural resource rent equivalent to 4.5% of GDP annually in Indonesia compared with 9.3% of GDP for Nigeria and 10.3% for Algeria. By 2005, Indonesian oil reserves had fallen to 4.3 billion barrels from 11.6 billion in 1980 (BP 2007), whereas Algerian reserves had risen to 12.3 billion barrels from 8.2 billion in 1980 (for a much smaller population) and Nigerian reserves had doubled to 36.2 billion from 16.7 billion. The resulting incentive conferred by declining oil reserves for Indonesia to create wealth was compounded by land scarcity in Java that cut per capita cropland (and potential crop rent) to one-third that of Algeria and Nigeria (Table 1).

Indonesia's decades of oil extraction had made little impression on per capita incomes: it had in 1970-74 the lowest per capita income of the three countries (Table 2). Despite Indonesia's lower income, however, population pressure was already causing the birth rate to peak, whereas the rate was accelerating in Algeria and Nigeria (Table 2). Nevertheless, per capita economic growth was robust in all three countries during 1970-74, averaging 4% per annum in Algeria; 5.6% in Indonesia and 11.8% in Nigeria (Table 2), which was recovering from civil war as well as expanding its oil production.

All three countries established new autocracies in the mid-1960s, which Collier and Hoeffler (2007) suggest may deploy rent more effectively than democracies. Also, they all exhibited ethnic diversity (Table 3), with friction between: Arabs and Berbers in Algeria; Nigeria's Muslim north and more educated south; and Indonesia's Javanese (45% of the population) and outer island groups. Algerian social tensions were least evident.

3.2 Fluctuations in Rent during 1970-2004

All three countries generated modest geopolitical rent and sizeable regulatory revenue in addition to their oil rent windfalls from the 1974-81 booms. Table 1 shows that aid generated over 4% of GNI in Indonesia in the early-1970s but soon fell back to around 1%, a similar ratio to Algeria and Nigeria. In contrast, oil rent rose abruptly through the 1970s but then fell in real terms through the early-1980s, demanding politically difficult decisions over rent rationing. Regulatory rent increased in relative importance during when oil rent fell.

Table 1 uses World Bank data to trace changes in the scale of the potential oil rent relative to GDP for 1970-2004. Indonesian oil rent almost quadrupled through 1975-79 as rising output compounded the effect of higher prices. It peaked at one-fifth of GDP through 1980-84 before halving through the late-1980s and then falling to less than one-third of the peak ratio. Although Algeria slowed its oil expansion in response to rising prices, its oil rent rose from one-tenth to one-quarter of GDP through the 1970s before halving in the late-1980s and recovering slowly thereafter.² Finally, Nigeria also slowed its oil expansion in the late-1970s but price effects helped triple the rent share of GDP to two-fifths, where it remained when oil prices fell (because GDP also shrank and depreciations of the real exchange rate boosted the local value of dollar exports).

There are no time series data for regulatory rent, but governments generate it by manipulating domestic prices, trade, the exchange rate and interest rates so it tends to increase with the share of state expenditure in GDP and trade policy closure (Jalali-Naini and Karimi 2003). Table 4 shows that the share of final government consumption expenditure in GDP was highest in Algeria and lowest in Indonesia. Public investment amplified this range. The share of government revenue in GDP in Algeria tripled to 54% during 1975-79 when investment is included because investment was unusually high and the public sector accounted for 92% of it. Even after some privatization by 1999 the Algerian public sector still generated 59% of GDP (Aissaoui 2001, 291). In Nigeria, public investment comprised two-thirds of total investment through 1973-90 (Moser et al. 1997, 37), which lifted total public expenditure to one-third of GDP during 1975-79. This compares to a one-sixth share of GDP for Indonesia where the government contributed only one-third of total investment (Hill 1996, 97).

Levels of trade policy closure also point to more protracted extraction of regulatory rent in the two new oil exporters, especially Algeria. All three governments closed their economies during the 1974-85 oil windfalls, but Indonesia proved most flexible. In Indonesia the mean rate of effective protection rose from 30% in the early-1970s to spike at 130% in 1983 (Hill 1996, 112) and was highly dispersed (Booth 1992, 228). But Indonesian rent-seeking was also tightly controlled: when oil prices collapsed, the government responded faster than Algeria and Nigeria and cut mean effective protection to 15-20% by 1989 and further in the 1990s (Stern 2003). In contrast, Algerian effective protection remained high into the late-1990s when rates were 60-110% on consumer goods like food and textiles (IMF 1998, 28). Finally, Nigerian effective protection by the mid-1980s averaged 200% for assembly industries like autos; 67% for import-processing industries; but was negative for agro-industry, forest-based industry and export industry.³

Combining the revenue streams, Algeria created most scope to extract regulatory rent at around one-fifth of GDP (based on data for countries with similar government expenditure and trade ratios) so its combined rent probably peaked above two-fifths of GDP in the early-1980s. In Nigeria, oil rent peaked and then held at almost two-fifths of GDP and total rent was boosted towards half of GDP by regulatory rent. Then Indonesian government deployed

² In per capita terms, Algerian oil rent fell from \$1,200 in 1981 (in 1990 dollars) to \$200 in 1986 and fluctuated around \$200-400 in the 1990s (Aissaoui 2001, 30).

³ Since Nigerian manufacturing averaged 7.5% of GDP, protected firms and their workers secured rent worth at least 5% of GDP annually from tariff protection alone.

the least rent through the oil booms at just over one-quarter of GDP and experienced the sharpest fall. Geopolitical rent was negligible in all three economies.

4. Resource Depletion and Wealth-Creating Policies in Indonesia

Indonesia had three strong incentives to create wealth. First, depleting oil reserves along with land scarcity in densely settled Java constrained natural resource rent and encouraged competitive diversification of the economy from the late-1960s. Second, the retreat of US forces from Vietnam and the rise of China provided a strategic motive to strengthen the economy. Third, Suharto was mindful of the role of political unrest and rural discontent in destabilising his predecessor and responded by repressing ethnic demands and targeting rural incomes. He pursued three out of four policies necessary for the effective deployment of rent, namely: (i) control, albeit not elimination, of rent seeking; (ii) timely macro adjustment; and (iii) sustainable rises in the incomes of the majority poor. The regime was eventually toppled by neglecting a fourth necessary policy: sustaining a political constituency for wealth creation.

4.1 Controlling Rent Cycling to Maintain Wealth Creation

Structuring this section in terms of each policy requirement: the regime exerted sufficient control over rent seeking to limit the adverse effects on GDP growth, despite cycling some rent to maintain the support of 'crony capitalists' (McIntyre 2000). Suharto early on established tight political links to Javan villages and direct contacts to central government, which gave enough control of rent-seeking to permit the government to execute timely macro policy corrections and enable Indonesian firms to plan for rent imposts/receipts⁴. Crucially, Indonesian rent cycling built a dualistic manufacturing sector comprising, first, efficient private firms, mostly Chinese (a positive outcome of ethnic diversity), that took rent as higher profits to be reinvested; and, second, inefficient state enterprises and other private firms (including 'crony capitalists') that took the rent in terms of reduced levels of efficiency (Flatters and Jenkins 1986).⁵ When oil prices fell in the mid-1980s and the technocrats opened the economy, the efficient domestic firms and new Japanese investors rapidly expanded exports. By the mid-1990s labour-intensive industry drove rapid PCGDP growth (Table 5), eclipsing the inefficient and often state-owned capital-intensive firms that thrived in the oil booms (Hill 1996, 156-64). Even in 1996, after some revival in crony capitalism, Indonesian rent-seeking was associated with relatively good governance indices, not least regarding civic voice, rule of law, deregulation and graft control (Table 6).

4.2 Prioritising Prompt Macro Adjustment to Shocks

Indonesia's second critical policy was achieved by appointing a team of economic technocrats with authority to adjust policy to macro imbalances in timely fashion. During economic crises, the team was given authority to resist statist pressures from nationalists. A third political group of mainly Chinese entrepreneurs became important when oil rent collapsed (Cassing 2000). Although rent-seeking flourished during oil booms, it was not allowed to override macro policy until the late-1990s when Suharto's loss of authority over the elite exacerbated the Asian financial crisis. Prior to that, the technocrats managed the volatile oil booms well. Gelb and Associates (1988) measure the rent deployment by comparing the actual pattern of investment and consumption through the booms with the pattern extrapolated from the 1970-72 pre-shock trend and attributing differences to the oil windfalls. To assist comparison, the magnitude of the departure from the pre-shock trend is measured as a fraction of non-oil output,

⁴ This is in contrast to, for example, the arbitrary rent extraction in the CIS economies where regional governors used illicit imposts to close their budget deficits, which inflicted wide variations in business payments from year to year (Jones-Luong 2004).

⁵ Malaysia achieved the same outcome by establishing in 1971 export promotion zones along side import substitution industry.

and corrected for changes from the base period inflation rate and economic growth rate. Table 7 summarises the findings, which show that the 1974-78 oil boom boosted government revenue by almost 16% of non-mining GDP annually, of which the technocrats sterilised two-fifths to slow domestic absorption and mute Dutch disease effects. Domestic rent absorption lifted public investment above the pre-shock trend to more than offset lower private investment. Public consumption expanded more modestly to almost exactly offset a fall in private consumption.

The technocrats had begun to rein in public expenditure and depreciate the real exchange rate in response to lower oil prices when the 1979 price shock occurred. As in most oil-rich countries, a laxer fiscal stance characterised the 1979-81 boom, which added almost 23% of non-oil GDP. Columns 3 and 4 in Table 5 suggest the economy had been minimally distorted in the early-1970s and that through 1972-81 the Dutch disease index rose by only 2.4% of non-mining GDP to leave the tradeables share of non-mining GDP a modest 3.4% below the expected size. Agriculture contracted slightly faster than expected and services expanded more slowly; but manufacturing and to a lesser extent construction expanded their shares faster than expected. The oil price collapse of the mid-1980s prompted the technocrats to cut public expenditure, depreciate the real exchange rate and open trade policy. These measures curbed fiscal and trade deficits, boosted agriculture, stimulated manufactured exports and sustained rapid per capita GDP growth until 1997 (Table 2).

4.3 Boosting Incomes of the Poor, but Undervaluing Pro-Growth Political Support

The third necessary policy channelled revenue to boost the incomes of the majority poor in rural communities, mainly in Java. It did not subsidise rural families but rather boosted competitive employment by diffusing green revolution techniques and expanding infrastructure, notably rural roads to improve farm access to markets. Rural incomes rose as high productivity growth in manufacturing and agriculture fed demand for goods and services from the rural sector, which still employed 45% of workers in the 1990s. The boost to labour-intensive agriculture helped spur Indonesia's rapid per capita GDP growth; maintain the gini coefficient around 0.34; and cut the poverty headcount from two-thirds to one-eighth 1967-97 (Timmer 2007).

Indonesia's controlled rent-seeking, sound macro management and boost to rural incomes were associated with structural change resembling the low-rent competitive industrialisation model rather than the high rent staple trap. But the low-rent model also predicts that rising per capita income broadens the pro-growth political consistency whereas the Suharto regime shrank that constituency in the late-1980s by rationing rent to benefit cronies at the expense of its political party (Golkar) and the army. The neglected groups resented the re-expansion of rent-seeking in the 1990s as politically-connected individuals increasingly evaded official controls on rent seeking to tap foreign capital for large unsound industrial projects (Cassing 2000, Stern 2003). The neglected groups supported the regime as long as it sustained rapid GDP growth (Timmer 2007) but their support evaporated when Suharto's fear of reprisals by rent-recipients prompted an indecisive response to the 1997 financial crisis that subjected the unprivileged majority to a 14% contraction in GDP.

5. Nigerian Ethnic Rivalry, Policy Capture and Revenue Mismanagement

Nigeria reveals how: ethnic rivalry can dissipate rent; increased state intervention facilitates patronage cycling; and the inertia of rent cycling retards reform.

5.1 Ethnic Rivalry Triggers Over-rapid Rent Distribution

Autocratic and democratic governments alike failed to prevent regional ethnic *political* interests from dominating over national *economic* aspirations that might have established ethnically mixed class-rooted national political parties (Bienen 1988). Instead, the initial federal

structure of three states, based upon the three largest ethnic groups, proved unstable because it raised fears in the neglected north of southern educational pre-eminence; in the south of northern numerical superiority; and among smaller ethnic groups of marginalisation. Iyoha and Oriakhi (2008) trace the beginning of revenue transfers from south to north to colonial rule. The transfers intensified after independence, however, because northerners held the presidency most of the time and eroded the principle of decentralised revenue ownership in order to transfer more oil rent from south to north. Early on, northern interference in western elections triggered protests that led to massacres of southern immigrants in northern cities, prompting a coup in 1966. Ethnic strife also led to secession by the eastern region in 1967, which fed a rapid expansion of the army from 10,000 to 250,000. Thereafter, the military sustained autocratic regimes through 1999, barring a brief return to democracy during 1979-83.

Successive federal governments forfeited control of rent seeking to appease ethnic interests. The 1974-78 oil windfall deployment aimed to visibly disperse the rent across ethnic groups by investing in infrastructure and education, which absorbed almost half of public investment (Bienen 1988). A similar dispersed distribution was intended for the 1979-81 boom, which largely coincided with civilian rule, but large state-owned industrial projects were added (Auty 1990). The dispersed rent deployment facilitated rent seeking by regional elites but it was also popular with the rural majority, which aspired to educate its children so they could leave the land and find urban employment.

5.2 Rent Cycling Promotes Market-Repressing Statist Intervention

Nigeria's regional elites backed indigenisation policies and statist intervention to further boost their access to rent. The large public sector projects of the 1980s functioned primarily as sources of patronage for the re-empowered national politicians who maximised rent cycling opportunities by cutting local oil revenue retention below 30% and ending the civil service's lead role in policy formation. The projects were located in each major region but this boosted their number at the expense of the economies of scale and incurred high infrastructure costs at greenfield sites. Construction costs were padded by over-elaborate plant specifications and bureaucratic delays. The capital costs were two to four times globally competitive levels so the projects could not recoup the investment, required subsidies and reduced economy-wide investment efficiency. The public projects also added politically-connected industrialists and state enterprise workers to an initial rent-seeking trio of regional politicians, the army and civil servants. The expansion of patronage also identified political parties with ethnic regions; blurred distinctions between public, party and personal finances (Bevan et al. 1999, 26); and eroded state government accountability.

Macro policy was a casualty of the ethnically-driven windfall deployment. Initially, the federal government sensibly sterilised a fraction of the 1974-78 oil rent abroad but lost control of rent cycling and exhausted the savings by 1978. Public consumption rose modestly above the pre-shock trend by 4% of non-oil output but public investment dominated domestic absorption and rose by an extra one-fifth of pre-shock non-mining GDP during the 1974-78 boom. It more than offset a decline in private investment and boosted total capital formation to 27% of GDP 1974-79 (Table 4). Public investment funded two-thirds of total domestic investment 1973-90 (Moser et al. (1997, 37), whereas the rate of private investment was insufficient to replace its capital stock let alone expand it (IMF 2005, 25). The inefficiency of the state investment pushed the economy-wide ICOR from 1.7 during the 1970-74 economic rebound to 12.2 through 1975-79 (as oil investments came on-stream). The ICOR was negative in the early-1980s (Table 2).

The scale of rent absorption was inflationary and intensified Dutch disease effects. Moreover, since rural investment was not coordinated with complementary farm inputs, agricultural output stagnated (Table 2) and per capita crop production fell. The share of agriculture in GDP declined three times faster than expected,⁶ while manufacturing grew too slowly to offset the decline, despite receiving investment priority. The Dutch disease index doubled to 17.2 (Table 8), but it

⁶ Cocoa output fell two-fifths 1970-82 and palm oil and groundnuts fell by two-thirds.

still underestimates the economic distortion because Nigerian manufacturing was not globally competitive. The investment inefficiency means that after correcting for differences in inflation and slower GDP growth, the 1979-81 windfall scarcely maintained the pre-shock rate of capital formation, while consumption dipped sharply below the trend.

5.3 Rent Cycling Inertia Retards Reform

The inertia of rent seeking stymied efforts to ration rent through the price downswing. Regional elites rightly perceived stabilisation and economic restructuring as threats because competitive markets cut their rent opportunities. The elites lobbied to expand public expenditure through downswings as well as booms. The Nigerian government accommodated these demands by assuming the oil price fall of the early-1980s was temporary and deferring macro-economic adjustment. During 1981-84 public sector deficits averaged 12.1% of GDP and were financed by borrowing and money emission, which stoked inflation. A massive devaluation of the exchange rate in the mid-1980s tripled the net debt/GDP ratio to 120% of GDP by 1987, compared with 4.5% in 1981, and lifted debt service to one-fifth of recurrent expenditure (Oyejide 1999).⁷ The government cut investment to sustain public consumption.

GDP growth turned negative through 1980-84, after decelerating in the 1974-78 oil boom. Far from boosting the welfare of the majority poor, Nigerian rent cycling impoverished them, but they continued to back ethnic regional redistribution over national class redistribution (Bienen 1988). Farmers were the principal losers because their deference to regional elites voided their capacity to dominate the national vote (agriculture employed 70% of the workforce). Although farming rebounded in the late-1980s when structural adjustment shrank indirect crop taxes (Table 1, lowest line), regional elites undermined the policy and pushed the costs of the growth collapse onto the poor once more. Nigeria's per capita income in 2005 was similar to its pre-shock level (Table 2) but the increasingly inequitable income distribution had doubled the poverty rate to 70% (Sala-y-Martin and Subramanian 2003).

Consistent with rent cycling theory, Nigeria's growth collapse arrested the demographic cycle so high population growth persisted and squeezed per capita rent. The theory predicts this eventually strengthens incentives to create wealth, but in Nigeria a political consensus for reform has emerged only slowly. A generation after oil prices softened, the inertia of rent cycling meant that Nigerian state governments still cycled 48% of national revenue in an opaque manner to benefit regional elites while the federal government drew heavily on off-budget funds (Heller 2007) with detrimental effects on governance quality (Table 9) and welfare.

6. Algeria's Statist Strategy Amplifies Distorting Rent Flows

Contrary to rent cycling theory, Algeria deployed its windfall oil revenue to accelerate wealth creation, probably due to the priority of national reconstruction after the war of independence. Moreover, its failure was not due initially to appeasing ethnic contests because the country had united against the colonial power and while the economy grew, unity was sustained. Rather, an ideological preference for central planning by the autocratic Front de Liberation Nationale (FLN), which governed Algeria for over a generation after independence in 1962 caused Algeria to pursue state-led heavy industry. The 1974-78 oil windfall was deployed to accelerate the strategy. The strategy met none of the four policy requirements for a successful rent cycling. Rather, it expanded rent recipient groups, repressed markets, neglected competitive labour-intensive agriculture and manufacturing and failed to sustain a pro-growth political coalition. When the oil rent fell, the strategy bequeathed high levels of unemployment and debt that demanded rent rationing that destabilised the regime. Successor governments deferred to rent recipients in the army, public sector unions and politically-

⁷ A series of debt renegotiations then reduced the debt/GDP ratio to 75% in 1996, 40% in 2000 and eliminated it entirely by 2005, courtesy of rising oil rent (Budina et al. 2007).

connected businesses so reforms lagged. This section explains the failed statist policy and its legacy of rent-seeking inertia.

6.1 State-Led Industrialisation, Market Repression and Economic Distortion

The Algerian oil windfalls were large, but rather than saving rent abroad so as not to exceed domestic absorption capacity, the government augmented the 1974-78 windfall by foreign borrowing and also transfers from the private sector by doubling seignorage to one-tenth of non-mining GDP. Four-fifths of the 1974-78 windfall went into investment, 92% of it into capital-intensive public sector projects, mainly heavy industry (Conway 1988). The strategy initially consolidated a broad political coalition by expanding government employment and subsidising consumer goods and services. But the investment was inefficient: the ICOR averaged a weak 6 in 1975-79 and deteriorated to 11 through the 1980s, before recovering to 6 in the 1990s. Total factor productivity sustained an annual decline of 3% during 1971-96 (Bisat et al. 1997) and remained negative into the mid-2000s (IMF 2006).

Although Table 8 suggests Algeria's windfall deployment *cut its* Dutch disease index during 1972-81, this is incorrect. Rather, central planning masked the scale of the economic distortion caused by statist policies by: repressing inflation; restraining wages through chronic unemployment; and favouring import-intensive capital investment. The state industry required high rates of protection and proved unable to diversify the economy and sustain economic growth when oil rent fell. Moreover, although agriculture contracted more slowly than the norms predict for an economy of Algeria's size and per capita income (Table 7), it too was protected. Even then, physical output fell through the booms (Table 2 bottom row) as the country slid from food self-sufficiency in 1962 to producing only one-quarter of its food by the late-1980s. In 2004, thirty-five years after initiating reforms to expand the private sector the public sector continued to generate 53% of GDP (IMF 2006, 24), more than double the expected level.

6.2 Political Destabilisation, Rent-Recipient Inertia and Incomplete Reform

The death of the powerful FLN leader in 1978 brought some price liberalisation in response to shortages and also a shift in state expenditure towards consumption that reduced investment to one-third of GDP in the 1980s and raised the share for housing and social infrastructure to almost half at the expense of heavy industry. As rent rationing intensified through the 1980s the FLN's broad-based political coalition unravelled. The promotion of private sector activity favoured larger businessmen with government connections and the high-level bureaucrats who set regulations to facilitate their entry (Chhibber 1996, 132). This increased corruption appreciably, which worsened the operating environment of smaller firms that lacked political guardians. The launch of privatization met shop-floor opposition in the state enterprises while increased targeting of subsidies at the poorest alienated the middle class (mainly small private firms and middle-level bureaucrats) who were least protected against inflation.

Even as the FLN government squeezed middle income groups to ration the rent, its reforms lagged due to pressure from rent recipients within the army, large politically-connected businesses, high-level bureaucracy and state sector unions. Public expenditure was shaped to balance these interests so macro adjustment comprised tardy cuts in public expenditure and increased goods rationing that failed to prevent the budget deficit rising to 13.7% of GDP in 1987 when external debt topped 100% of GDP, twice the maximum sustainable level. The rent rationing led to street protests and the weakened government drafted a new constitution in 1989 to permit multi-party elections. By this time, the electorate had polarised and despite government manipulation of the electoral rules, an Islamist party secured 54% of the votes in local elections and 47% in national elections (Entelis and Arone 1995). The Islamist party was well-organised and used the mosques to promote policies to combat corruption as part of a dual reform strategy of nurturing private business along side the state sector that appealed to the FLN's neglected constituencies. The military suspended the constitution in 1992, triggering three years of violence that cost 100,000 lives. Another new constitution in 1995

provided for an elected president and an advisory legislature elected by proportional representation, which brought modest gains in governance (Table 6), but reform still lagged.

The political imperative of consensus continued to retard reform as rent recipients fought trade policy reform, privatisation and labour market reform since each policy menaced lucrative monopolies and/or employment security. Consequently, state enterprises remained over-protected, credit overwhelmingly favoured state firms and financial markets were repressed by negative interest rates (Abdelbasset and El-Said 2008). Algeria's index of the difficulty of doing business is one of the MENA region's highest (Esfahani, 2008, 90) so unsurprisingly, incentives for private investment in labour-intensive activity failed to cut unemployment, which rose to 30% by the late-1990s. The justification for the consensus policy was to limit destitution (Adams and Page 2001) but although the gini coefficient eased from 0.40 to 0.37 during 1985-95, incomes levelled down and the poverty rate doubled to 23% in the 1990s

The incentive to reform was weakened by the mid-2000s oil windfall, which conferred an extra 25.1% of non-oil GDP (14.3% of GDP, Table 1) annually during 2000-2004 that was used to boost public expenditure to stimulate growth and employment. The public sector still generated 53% of GDP in 2004 (IMF 2006, 24), however, although by then the private sector share of *non-oil* GDP had risen from two-thirds to four-fifths. The employment contribution from small and medium-sized firms was conspicuously modest at one-half to one-sixth the level of most reforming CIS economies, due to both over-regulation and over-taxation (IMF 2006, 25). The public spending boost accelerated GDP growth (Table 2), however, and halved unemployment to 15% as domestic demand stimulated agriculture, construction, public works and non-government services (IMF 2007, 4). Yet, non-hydrocarbon exports remained minimal. Consequently, Algerian GDP growth remains oil-driven and in the absence of further reform it is likely to slow when oil prices fall, causing unemployment to rise again.

7. Conclusions

Recent research identifies weak institutions as a principal cause of the underperformance of high-rent developing economies but this doesn't get us very far because in low-income countries institutions reflect political incentives rather than mould them. Rent cycling theory suggests that rent (shorthand here for supernumerary government revenue), strongly affects political incentives. Since statistical analysis treats rent flows as a black box, the paper has drawn upon comparative case studies to track rent flows and analyse how their size, degree of dispersal across economic agents and ethnic factionalism impact political incentives. The paper suggests statist ideology should be added to make a trio of factors that amplify the negative impact of high rent. This finding is not unexpected because statist ideology like them represses markets: market repression lies at the heart of the rent curse and also feeds the inertia of rent cycling that blocks reform.

Rent cycling theory suggests that initial conditions in the early-1970s were: least propitious for Nigeria as an expanding producer with high ethnicity; more favourable for Algeria with low ethnic tension along with expanding oil reserves; and equivocal for Indonesia, because diminishing per capita oil reserves incentivised wealth creation but ethnic tension favoured using rent to buy regional support. Indonesian success reflects Suharto's targeting of wealth creation in response to depleting oil reserves. He pursued three out of four key policies for successful rent cycling, namely controlling rent-seeking; timely macro adjustment; and promotion of sustainable employment for the majority poor. His regime failed to sustain a pro-growth political constituency, however, and eventually forfeit power in consequence. The successor democratic regime is associated with ethnic secession, deteriorating governance (Table 6) and slow GDP growth.

Nigerian and Algerian governments neglected all four policies for successful rent cycling. Nigerian governments dispersed windfall rent to appease regional ethnic elites who backed increased state intervention in order to further boost scope for rent seeking. When oil prices collapsed, reform was postponed and regulatory rent extraction expanded to maintain patronage, which benefited the elite at the expense of the majority poor so the elite retarded reform despite worsening poverty and income inequality. Nigeria therefore meets rent cycling theory predictions but Algeria, initially, did not. Despite its expanding oil reserves, Algeria's socialist government espoused wealth creation and repressed ethnic demands. But espousal of central planning distorted the economy from labour-intensive agriculture and manufacturing into inefficient heavy industry that raised unemployment, accumulated unsustainable debt and entrenched rent seeking that destabilised the regime and retarded reform.

The case studies suggest statistical research might more profitably focus on factors that mould political incentives rather than on institutions; and that rent cycling theory should incorporate the impact of ideology on political incentives. Table 10 provides an overview of rent cycling outcomes. Cases A and B identify the staple trap associated with high supernumerary government revenue that is concentrated and, respectively, ethnic tension (Nigeria) or statist ideology (Algeria). Case C recognises that even concentrated rent can confer wealth-creating incentives if ethnic tension is limited and statist ideology is eschewed, whether the rent/GDP ratio is high (Saudi Arabia) or modest (Indonesia), but empirical experience indicates this has not historically been a common outcome. Case D indicates that dispersed commodity revenue flows can avoid the rent curse, as Baldwin (1956) admirably explains, provided ideology and ethnicity don't lead governments to convert dispersed rent into concentrated rent. Through the 1960s and early-1970s both Kenya and Cote d'Ivoire (like pre-diamonds Botswana) avoided this error, probably because their elites were agricultural exporters. In contrast, elites that were ethnically polarised (Uganda) or ideological (Zambia) used marketing boards to concentrate crop rent and furnish thereby patronage, with consequences that replicate Cases A and B, respectively. Finally, Case E posits that low rent so strongly incentivises governments to eschew wealth-impairing outcomes that the competitive industrialization model, with its limited market distortion, invariably holds. Mauritius furnishes an example: intensifying land scarcity propelled the economy from rent-driven growth to manufacturing-driven growth, despite acute ethnic tensions. However, a further category might be added to include those countries in which growth collapsed and locked them into Sachs' 'Malthusian' category from which the inertia of rent seeking as hitherto prevented their escape.

Lastly, with regard to policy implications: Indonesian experience identifies four policies for efficient rent deployment. The creation of pro-reform political coalitions to sustain these policies has eluded Algeria and Nigeria for a generation and the mid-2000 oil windfall may perpetuate this outcome. In these conditions, a dual track reform strategy can postpone confrontation with rent recipients in the distorted economy (Track 1) while growing a dynamic market sector (Track 2) and its associated pro-reform political constituency to eventually challenge and/or buy off rent-recipients in the distorted sector. This is, in effect, what Indonesia partially achieved with its dual manufacturing sector and also what Algeria's Islamist party proposed in the early-1990s, but the military blocked its implementation. China, Mauritius, Malaysia and more recently the UAE, have successfully adopted varying forms of dual track reform so the policy warrants further research.

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Table 1 Supernumerary revenue indices 1965-2004, Algeria, Indonesia and Nigeria

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Algeria								
Aid (%GNI)	3.7	1.8	0.7	0.3	0.3	0.5	0.6	0.4
Oil output (mbpd) ¹	0.82	1.02	1.17	1.09	1.22	1.34	1.42	1.72
Oil depletion (% GDP)	n.a.	9.5	24.6	25.4	11.9	14.8	18.8	33.1
Per capita arable (ha)	0.50	0.44	0.41	0.34	0.30	0.28	0.26	0.25
Net barter terms of trade ²	n.a.	n.a.	n.a.	167.3	76.5	68.3	61.3	104.0
Indonesia								
Aid (%GNI)	3.9	4.2	1.5	1.0	1.4	1.4	0.9	0.7
Oil output (mbpd) ¹	0.54	1.11	1.56	1.49	1.41	1.60	1.53	1.29
Oil depletion (% GDP)	n.a.	4.5	16.0	21.1	10.4	7.2	5.9	9.6
Per capita arable (ha)	0.16	0.15	0.13	0.12	0.12	0.10	0.09	0.11
Net barter terms of trade ²	n.a.	71.3	124.3	177.5	105.0	89.5	87.1	99.9
Nigeria								
Aid (%GNI)	1.3	0.7	0.2	0.1	0.6	1.1	0.6	0.7
Oil output (mbpd) ¹	0.34	1.75	2.03	1.48	1.52	1.97	2.14	2.26
Oil depletion (% GDP)	n.a.	10.3	27.7	37.3	37.3	42.7	33.7	46.1
Per capita arable (ha)	0.54	0.49	0.43	0.36	0.33	0.30	0.25	0.23
Net barter terms of trade ²	n.a.	n.a.	n.a.	169.3	84.6	68.7	62.2	100.6

Source: World Bank (2007a). 1. BP (2007); 2. 2000 = 100, with 1970-79 rebased from World Bank (1989).

Table 2 Some growth indices 1965-2004, Algeria, Indonesia and Nigeria

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Algeria								
PCGDP (US\$2000)	1110.1	1238.9	1468.2	2232.0	3434.0	4062.0	4242.0	4610.0
Population (%/yr)	1.9	2.7	3.0	3.2	3.3	2.8	2.4	1.6
GDP (%/yr)	1.7	6.0	7.3	7.1	4.2	1.4	-0.3	3.5
PCGDP (%/yr)	-0.2	3.2	4.0	3.7	0.9	-1.4	-2.6	1.8
Crop output index ³	85.0	71.6	69.4	59.5	58.0	76.0	82.7	98.7
Indonesia								
PCGDP (US\$2000)	199.2	203.5	261.3	335.3	429.0	516.9	692.7	832.1
Population (%/yr)	2.1	2.3	2.4	2.3	1.9	1.8	1.6	1.4
GDP growth (%/yr)	2.3	4.9	8.2	7.4	6.7	6.1	8.0	1.7
PCGDP (%/yr)	0.2	2.5	5.6	5.0	4.7	4.2	6.2	0.3
Crop output index ²	28.8	31.2	38.2	43.7	56.8	70.6	85.0	96.5
Nigeria								
PCGDP (US\$2000)	297.4	280.1	398.9	421.8	350.7	321.5	360.2	355.3
Population (%/yr)	2.3	2.4	2.5	3.0	2.8	2.9	2.8	2.5
GDP growth (%/yr)	4.5	0.7	11.8	2.2	-3.8	5.7	3.6	2.5
PCGDP (%/yr)	2.1	-0.9	9.1	-0.8	-6.5	2.8	0.8	-0.1
Crop output index ³	30.9	35.3	37.9	33.5	33.9	45.8	73.8	92.9

Source: World Bank (2007a). 1. 2000 = 100.

Table 3 Indices of ethnic and religious heterogeneity, Algeria, Indonesia and Nigeria and Comparators

	Ethnic polarisation	Ethnic fragmentation	Religious polarisation	Religious fragmentation
Algeria	0.514	0.299	0.032	0.016
Indonesia	0.529	0.793	0.823	0.660
Nigeria	0.404	0.885	0.836	0.498
Angola	0.572	0.805	0.906	0.453
Botswana	0.650	0.485	1.000	0.500
Ghana	0.661	0.731	0.880	0.582
Mauritius	0.803	0.482	0.888	0.628
Saudi Arabia	0.114	0.059	0.113	0.058
South Africa	0.718	0.469	0.790	0.442
Sudan	0.699	0.711	0.711	0.427
Uganda	0.279	0.982	0.846	0.524
Zambia	0.606	0.787	0.894	0.451

Source: Montalvo and Reynal-Querol (2005), 319-22.

Table 4 Composition of Absorption 1965-2004, Algeria, Indonesia and Nigeria (% GDP)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Algeria								
Fixed capital	n.a.	33.3	42.7	33.8	30.0	27.1	25.4	23.26
Final govt. consumption	17.1	16.1	14.7	15.7	18.6	16.4	16.7	14.5
Household consumption	59.3	51.5	47.4	46.1	57.6	53.4	53.2	41.5
Exports (% GDP)	23.8	25.0	30.8	30.1	17.0	24.4	27.1	38.2
REER ²	n.a.	n.a.	n.a.	297.4	291.8	132.4	105.1	94.2
Indonesia								
Fixed capital	n.a.	n.a.	22.3	23.7	25.1	27.0	26.4	19.8
Final govt. consumption	6.7	8.3	9.7	10.7	9.8	8.6	6.9	7.3
Household consumption	88.5	70.3	61.7	57.5	58.8	58.7	65.5	62.5
Exports (% GDP)	8.6	19.4	25.4	28.1	22.7	26.5	33.7	34.7
REER ²	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nigeria								
Fixed capital	n.a.	19.8 ²	26.9	19.0	15.6	20.5	19.1	22.6
Final govt. consumption	8.2	9.0	13.6	15.3	12.5	15.5	10.3	24.0
Household consumption	83.4	71.2	60.7	67.3	69.8	59.9	66.4	43.4
Exports (% GDP)	10.7	14.3	21.2	19.3	23.5	42.3	41.6	48.3
REER ²	n.a.	n.a.	n.a.	539.6	286.3	96.5	148.3	107.0

Source: World Bank (2007a). 1. 2000 = 100.

Table 5 Structural change 1965-2004, Algeria, Indonesia and Nigeria (% GDP)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Algeria								
Agriculture	10.4	8.3	9.3	8.3	11.5	11.2	11.3	10.0
Industry	41.2	49.1	53.6	56.5	47.8	49.7	49.8	55.3
Manufacturing	14.3	15.2	10.8	11.6	14.3	12.1	9.7	7.4
Services	48.4	42.6	37.1	35.2	40.7	39.1	39.1	34.7
Indonesia								
Agriculture	52.3	50.8	39.1	29.0	23.4	23.0	18.3	17.5
Industry	14.7	14.2	25.1	35.1	39.9	36.3	39.9	43.7
Manufacturing	9.0	9.1	10.0	10.8	12.9	17.8	21.9	25.5
Services	33.0	35.0	35.8	36.0	36.7	40.7	41.8	38.9
Nigeria								
Agriculture	53.3	37.3	29.9	29.9	36.9	27.8	34.3	26.7
Industry	12.6	22.3	32.7	34.8	32.5	50.8	41.9	48.3
Manufacturing	5.7	3.7	6.0	9.0	7.4	4.9	5.1	4.1
Services	34.1	40.4	37.4	35.3	30.6	21.2	23.8	25.0

Source: World Bank (2007a).

Table 6 Changes in institutional quality 1996-2006: Algeria, Indonesia, Nigeria and Botswana

Country		Voice + account- ability	Political stability	Effective governance	Regulation burden	Rule of law	Graft	Overall index
Nigeria	1996	-1.78	-1.63	-1.36	-1.12	-1.35	-1.25	-8.49
	2006	-0.78	-1.99	-0.96	-0.89	-1.27	-1.29	-7.18
Indonesia	1996	-0.13	-0.81	+0.14	+0.43	-0.36	-0.55	-1.28
	2006	-0.25	-1.17	-0.38	-0.26	-0.82	-0.77	-3.65
Algeria	1996	-1.23	-2.44	-0.40	-0.89	-1.21	-0.37	-6.54
	2006	-0.83	-0.89	-0.35	-0.61	-0.63	-0.39	-3.70
Botswana	1996	+0.86	+0.68	+0.24	+0.77	+0.62	+0.38	+3.54
	2006	+0.57	+1.23	+0.74	+0.48	+0.63	+0.81	+4.46

Source: World Bank (2007b). The index scores each range from 2.5 to -2.5 and are based on several surveys in each country.

Table 7 Oil windfall deployment 1974-81: Algeria, Indonesia and Nigeria (% non-mining GDP)

	Algeria 1974-78	Algeria 1979-81	Indonesia 1974-78	Indonesia 1979-81	Nigeria 1974-78	Nigeria 1979-81
Domestic oil windfall/year	27.1	29.7	15.9	22.7	22.8	21.9
Real	-4.6	-17.6	1.6	-2.5	-2.3	-6.1
Price effect	31.9	47.3	14.3	25.2	25.1	28.0
Absorption effects						
Trade and non-factor service	-4.3	8.9	5.3	9.6	2.8	0.1
Current balance	-9.8	-0.6	4.8	6.1	5.4	3.9
Non-oil growth effects	-7.4	-6.7	-2.4	-3.5	-1.5	-29.8
Real allocation+ growth effect						
Private consumption	0.0	2.7	-1.5	7.7	2.9	-15.3
Public consumption	0.3	2.5	1.5	3.0	4.2	-2.3
Private investment	n.a.	5.6	-3.4	7.9	-9.8	0.4
Public investment	19.1	n.a.	7.9	n.a.	18.5	n.a.

Source: Gelb and Associates (1988), 62-65.

Note: The table is based on a counterfactual of the outcome in the absence of the oil windfall and makes four key assumptions:

1. Relative price deflators constant at their average 1970-1972 'base period' ratio;
2. A constant ratio of real mining output to non-mining GDP;
3. A constant ratio of total absorption to output;
4. Consumption and investment change their share of absorption as per capita income rises in line with their 'normal' shares derived from Syrquin and Chenery.

The windfalls and their uses are derived as deviations of actual supply and demand shares from the projections and expressed relative to non-mining GDP to aid comparison. It then becomes possible to distinguish the contribution of volume changes and price changes, and also, to adjust for any acceleration or slowdown in the growth of non-mining GDP (assumed attributable to windfall absorption) compared with the base period. See: Gelb (1988), 56-59.

Table 8 Economic structure 1972 and structural change 1972-81 Algeria, Indonesia and Nigeria

	Algeria Actual	Algeria Syrquin Norm	Indonesia Actual	Indonesia Syrquin Norm	Nigeria Actual	Nigeria Syrquin Norm
Share of Non-mining GDP 1972 (%)						
Agriculture	11.0	25	45.1	46	39.2	38
Manufacturing	15.8	20	11.0	11	5.1	15
Construction	13.4	5	4.3	3	10.7	4
Services	59.8	50	39.7	40	45.0	43
Mining Share of GDP 1972 (%)	17.9	4	12.1	6	15.1	5
Annual change in share of NM GDP (%)	<u>1972-81</u>		<u>1972-81</u>		<u>1972-81</u>	
Agriculture	-0.38	-0.82	-1.50	-1.31	-1.90	-0.67
Manufacturing	0.52	0.28	0.77	0.34	0.48	0.11
Construction	0.82	0.09	0.26	0.10	0.53	0.03
Services	-0.98	0.45	0.48	0.86	0.88	0.53
Dutch disease index 1972	18.2	0	-0.9	0	8.7	0
Dutch disease index change 1972-81	-7.0	0	-2.4	0	8.5	0

Source: Gelb and Associates (1988), 88.

Table 9 Index of institutional quality 2005: Selected oil exporters and comparator countries

Country	PCGDP (US\$PPP 2005)	Voice + account- ability	Political stability	Effective governance	Regulation burden	Rule of law	Graft	Overall index
Mali	1,040	+0.47	+0.06	-0.46	-0.50	-0.12	-0.29	-0.84
Zambia	1,040	-0.35	+0.02	-0.94	-0.62	-0.62	-0.82	-3.33
Nigeria	1,183	-0.69	-1.77	-0.92	-1.01	-1.38	-1.22	-6.99
Mozambique	1,364	-0.06	+0.04	-0.34	-0.60	-0.72	-0.68	-2.36
Benin	1,118	+0.34	+0.31	-0.69	-0.55	-0.59	-1.00	-2.18
Cote d'Ivoire	1,551	-1.50	-2.49	-1.38	-0.95	-1.47	-1.23	-8.99
Sudan	2,151	-1.84	-2.05	-1.30	-1.29	-1.48	-1.40	-9.36
Cameroon	2,300	-1.19	-0.34	-0.90	-0.76	-1.02	-1.15	-5.36
Ghana	2,316	+0.41	+0.16	-0.09	-0.14	-0.23	-0.38	-0.27
Angola	2,425	-1.15	-0.82	-0.96	-1.24	-1.28	-1.09	-6.54
Indonesia	3,843	-0.21	-1.42	-0.47	-0.45	-0.87	-0.86	-4.28
Azerbaijan	5,607	-1.16	-1.21	-0.73	-0.52	-0.84	-1.01	-5.47
Venezuela	6,531	-0.50	-1.22	-0.83	-1.15	-1.22	-1.00	-5.92
Algeria	7,111	-0.92	-1.09	-0.37	-0.63	-0.71	-0.43	-4.15
Libya	n.a.	-1.93	+0.30	-0.96	-1.44	-0.73	-0.89	-5.65
Kazakhstan	8,515	-1.19	+0.03	-0.71	-0.47	-0.79	-0.94	-4.07
Botswana	10,790	+0.68	+0.94	+0.79	+0.76	+0.70	+1.10	+4.97
Malaysia	10,843	-0.41	+0.49	+1.01	+0.50	+0.58	+0.27	+2.26
Trinidad + Tobago	13,758	+0.44	-0.05	+0.29	+0.65	-0.07	+0.01	+1.27
Saudi Arabia	14,729	-1.72	-0.70	-0.38	-0.01	+0.20	+0.23	-2.36
UK	32,005	+1.30	+0.34	+1.70	+1.53	+1.69	+1.94	+8.50

Source: World Bank (2007b). The index scores each range from 2.5 to -2.5 and are based on several surveys in each country.

Table 10 Typology of rent streams, cycling filters and incentive outcomes

Rent/GDP	Rent stream	Ideology	Ethnic polarisation	Incentive outcome	Examples
A. High	Point	Market	High	Maximise patronage + repress voice	Bolivia, Cameroon, Ecuador, Nigeria
B. High	Point	Statist	High/Low	Maximise patronage + repress voice	Algeria, Libya, Pre-83 Ghana, Guinea, Nigeria, Sudan, Zambia
C. High	Point	Market	Low	Create wealth + incrementally democratise	Post-72 Botswana, Chile, Indonesia, UAE, Saudi Arabia, Oman
D. High	Dispersed	Market	Low/High (because less stable if high)	Create wealth + incrementally democratise	Pre-76 Ivory Coast Pre-72 Kenya C19 US Midwest
E. Low	Not relevant (no rent)	Market	Low/High	Create wealth + incrementally democratize	China, Mauritius, Taiwan, S. Korea, C19 UK