

Alan Gelb

# Managing Oil Rents from Scarcity to Abundance in South Sudan



## In brief

- South Sudan is highly dependent on oil for exports and fiscal revenues. This has led to economic volatility, and with the cut-off of oil exports, has led to economic challenges.
- The rationing of foreign exchange and a decrease in fiscal spending, as well as giving priority to essential fuels and supplies, presents difficult policy decisions. The government should prepare for the resumption of oil revenues and put in place measures to ensure revenues are sustainable and flexibly managed.
- The impact of oil on a country's development is driven by politics. Strong institutions of accountability and technical capacity, political participation and a low level of societal fractionalization can aid in developing a broad, widely shared vision of how to use revenues.
- Oil dependence exposes countries to price volatility and uncertainty. Chile and Botswana managed well due to their institutional foundations and careful macro policies.
- In the long-term, sustainability of oil revenues is dependent on how much is saved. There is a debate as to whether developing countries should save given the many urgent needs, and this is made harder if budgets and wealth funds are not managed transparently. South Sudan may consider contracting out the management of a reserve fund to a well-respected institution with a mandate to report in a public and transparent manner.
- Poor capacity, corruption and the politicization of spending have led to unproductive and poorly managed programs that manage domestic investments in many oil-rich countries.
- South Sudan needs to diversify away from exclusive dependence on oil. Resource-based, as well as agriculture and other minerals are the most promising sectors.

## Introduction

*“Its economy is heavily constrained, including the absence of essential infrastructure”*

South Sudan is unique in many ways. A new country, landlocked, formed in very difficult conditions and still facing many unresolved issues with limited capacity in many areas. Highly dependent on oil for exports and fiscal revenues, it has recently experienced the destabilizing sequence of an oil-led spending boom in 2010 and 2011 followed by a sharp spending cutback in 2012 with the cut-off of oil exports. Its economy is heavily constrained, including the absence of essential infrastructure. Yet South Sudan also has other resources, including abundant land, water and, the most important resource, its people.

One of the main lessons of the last decade is the importance of mobilizing the productivity of a nation’s people. Empirical cross- country studies point in particular to the complementary role of human capital and “governance capital” with natural resource capital. Countries that have managed to develop a balanced endowment in these dimensions have done well. They include some of the world’s wealthiest nations, such as Australia and Canada. On the other hand, countries with resource wealth that have not managed to add to their capital in these other dimensions have typically done poorly, both in terms of economic and political development.

It may seem strange to focus on oil revenue management at a time when the immediate problem is how to manage the absence of oil revenues. The current situation cannot continue for an extended period. Many others, including the World Bank and the US Secretary of State, have stressed the importance of ending the current stalemate with Sudan and restoring the oil flow. Considering the weight of oil in exports and fiscal revenues it is not clear how long South Sudan can continue as a functioning state without it. But when the situation changes, as it will, it will change very quickly including, possibly, greater willingness of some lenders to advance funds against future oil receipts.

*“Oil dependence challenges technical economic management and even more severely challenges national political economy”*

In principle, natural resources in general and oil in particular are blessings. They open up options for a country’s development that are otherwise not possible. But oil dependence challenges technical economic management and even more severely challenges national political economy.

For these reasons, although South Sudan is in a crisis period it is not too early to think about the post-crisis when oil revenues begin to return. Every country is unique and will need to find its own way to face its challenges, but each country can learn from the experience of other countries. It is useful to consider three phases: managing without oil, transitioning to oil flows, and post-oil management, development and diversification. This requires decision-making under uncertainty. Not everything is under the control of the government but some opportunities can be foreseen as well as dangers.

## Phase 1: Managing without Oil

*“Some other resource-rich countries have weathered large adverse shocks successfully”*

With oil revenues 98% of budget revenues and almost all of exports, fiscal policy is integrally linked with balance of payments and reserves management. Even as efforts are made to increase non-oil tax revenues, their small base, constraints on the financing of any deficit, and the need to conserve reserves place tight constraints on public spending. The government may, of course, seek to access investors and secure financial support, but this is likely to be very difficult under current conditions of high uncertainty.

As already seen, the rationing of foreign exchange has led to a sharp devaluation of the parallel exchange rate to about twice the official rate. The price of imported goods has skyrocketed relative to domestic goods and wages, creating high inflation, at least temporarily. This relative price shock is like a supply shock to the economy if the imports are intermediate goods (fuel), and a demand shock for those consuming imported final goods (food).

The government can shift the impact somewhat by rationing. For example, it can give priority to essential fuels and supplies relative to travel or education allowances or even food imports, and so influence how the shock is felt. There will be some policy trade-offs but the effect on living standards will be severe, particularly in urban areas where much consumption is imported.

This shock places huge pressure on the government to relax nominal spending limits because the real purchasing power of spending on imported goods falls sharply. This risks further accelerating inflation especially as people and businesses will realize that the value of their money holdings is eroding and start to adjust downwards their real holdings of domestic money. People will lose faith in domestic money and shift to other currencies and barter. As in Zimbabwe and other cases, the economic effect could result in a catastrophic hyperinflation and further uncertainty and economic contraction outside of the subsistence economy. This could also end South Sudan's independent currency, at least until confidence has been re-established. It is important to find an end to this phase before it reaches this point.

*“South Sudan should use the present time to prepare for the resumption of oil revenues”*

There are therefore several immediate and difficult policy issues – the level of fiscal spending, how much foreign exchange to release, and how to ration it between the official and parallel market. But all are very painful, considering the fiscal and export share of oil in South Sudan, and it is not clear that the situation is viable once reserves are depleted.

Some other resource-rich countries have weathered large adverse shocks successfully. In Mongolia, Soviet subsidies worth 30% of GDP were withdrawn in the early 1990s. Estimates of GDP per head fell from around \$1500 to \$460, a huge decrease. The contraction was especially critical for urban GDP, and it triggered reverse migration. About 20% of the population moved back from the cities to the largely nomadic economy in rural areas. However, Mongolia had some advantages over South Sudan. There was no conflict. The government could still rely on copper revenues, though getting the copper out to the south involved solving some logistical problems. The rural economy could support the migrants, most of whom were first-

generation urban and had close family ties with rural dwellers; exports included cashmere, which is highly valued on world markets. Donors were supportive. The government had good capacity and little corruption, and was also able to dispose of some assets and attract new investors. It took some years to recover but they did. With new mineral discoveries and high world prices, Mongolia has been riding a boom for several years.

South Sudan should use the present time to prepare for the resumption of oil revenues. In 1975 Indonesia faced a severe crisis in the middle of an oil boom, because of the bankruptcy of Pertamina, its national oil company. The president gave strong backing to a very able team of technocrats (known as the Berkeley Mafia) in the Ministry of Finance. They took advantage of the unexpected check on spending to put in place measures to ensure that the revenues were sustainably and flexibly managed after that. They renewed their efforts to spend efficiently, including in the rural areas where they delivered a huge program of public works. They did not do this just to spend money, but monitored the use of the resources to ensure that projects were executed as planned. In some cases the state supplied only materials with labour coming from local communities; this also helped building on community-level organization. They also took steps to diversify their economy, first strengthening and modernizing agriculture and then, once food supply had been secured, moving into industry.

Public spending levels were contained to build up reserves, and the exchange rate was managed to avoid strong appreciation of the exchange rate and to keep non-oil exports competitive. Indonesia has grown strongly, reduced poverty and avoided the problems of many other oil-dependent countries. It now has quite a diversified economy and is no longer dependent on oil.

## Phase 2 and 3: Oil Revenues Return

*“It is clear that the impact of oil on a country’s development is driven by politics, which shape how the revenue is used; also that oil revenues can shape politics”*

### Governance and Vision

From country experiences, it is clear that the impact of oil on a country’s development is driven by politics, which shape how the revenue is used; also that oil revenues can shape politics. What do we mean by good governance in the context of natural resource wealth? Part of the answer is strong institutions of accountability, in particular through working democratic processes. These have been weak in many oil exporters, particularly in Africa and the Middle East. However, political participation alone is not enough. If the polity is heavily factionalized, with strong conflicting views on the distribution and use of oil revenues, policies and spending can be short-term and volatile. This has been a common pattern in Latin America, where regulatory uncertainty has also caused cutbacks in private investment in the extractive industries.

*"Vision alone is not enough. Development history is littered by "national visions"...These... are useless unless the country builds the technical capacity"*

Countries therefore need to develop a broad, widely shared, vision of how to use the revenues. But vision alone is not enough. Development history is littered by “national visions” whether for 2020, 2030, 2040, or beyond. These express worthy aspirations but are useless unless the country builds the technical capacity to implement the vision, to link it to the policy decisions of the day, and to monitor its implementation. Sadly, many do not.

Vision and effective planning are important for development in general but more so for oil exporting countries because – unless (as discussed below) resources are distributed among citizens as some have proposed – government controls a major part of national income and it cannot avoid playing an important part in the development of the country. This does not mean that government can ignore the private sector; it rather means that government needs to implement a vision that encourages and facilitates private sector investment on as broad a basis as possible. Countries that have handled resource rents well – such as Malaysia, Chile and Indonesia – have all had a broad vision to guide their policies, a long-term horizon, and strong economic management and planning capability, including facilitating private sector entry and investment.

### **Sustainable Fiscal Management**

Spending Levels: Oil dependence exposes exporting countries to exceptional uncertainty. Oil prices are very volatile. A careful statistical study in early 2008 found that over 4 years a plausible upper bound for future oil prices was \$390 per barrel and the lower bound was \$34. At the time, no one could imagine a price of \$34; prices were in the range \$115 – 140 and seemingly headed higher. Yet several months later \$34 is just what the spot market price fell to, with the global crisis. Price forecasts for oil have a sorry record. The only thing we can say about them is that they have been almost consistently wrong. They do not predict major market turning points. In the last few years, forecasts and futures markets have just extrapolated current prices; they are essentially useless as a guide to medium-term fiscal management.

*"Price forecasts for oil have a sorry record. The only thing we can say about them is that they have been almost consistently wrong"*

How to respond to revenue booms and busts? One of the clearest lessons from comparative research is that boom-bust cycles in public spending are very costly. Countries grow only a little more rapidly when spending booms, but the growth is not sustainable and when spending contracts they move into sharp negative growth. One estimate found that growth increased little for large export terms of trade gains but that a 10% loss translated, on average, into a GDP loss of 3.6%. The response to spending booms and slumps is not symmetric. This is true in both rich and poor countries, and has been confirmed by detailed sector studies as well as aggregate measurements.

Several factors contribute to this asymmetry. Most private boom investment is often heavily tilted towards real estate that cannot be switched over to produce non-oil exports when oil revenues fall. Public facilities like hospitals are built, and then wasted because there is not the money to cover their recurrent costs. Labour costs and also some prices are more flexible upwards than downwards. Wealth effects and pro-cyclical capital market constraints cause non-oil spending levels to contract at exactly the time when more effective demand is needed. It is even worse

*“Chile is recognized as having one of the world’s most sophisticated systems for managing resource volatility. Its copper stabilization fund was started in 1987, a time when copper prices were less than a fifth of recent levels”*

when countries have borrowed heavily to finance spending at the peak of a boom. The market opens up when times are good. When they are bad, refinancing loans is difficult. Pro-cyclical fiscal policies can easily turn what should be a resource windfall into a loss, and they have done so for many countries. Counter-cyclical fiscal policy is essential if the exporting country is to achieve a stable platform for growth.

Recommendations to contain spending often come during the booms. This is much too late, because it takes time to create the institutions to manage spending well. Chile and Botswana are examples. Both have managed well through huge fluctuations in their mineral export prices, for copper and diamonds respectively. Botswana’s savings, for example, helped the country to weather the shock of falling resource revenues in the aftermath of the global crisis. But the institutional foundations of Chile’s famous revenue management and Botswana’s careful macro policy were set during pre-boom periods. Chile is recognized as having one of the world’s most sophisticated systems for managing resource volatility. Its copper stabilization fund was started in 1987, a time when copper prices were less than a fifth of recent levels. South Sudan should look at such examples and consider how to implement credible arrangements for managing the volatility that will return with oil revenues. A fiscal buffer to smooth spending against market shocks probably needs to be at least on the order of at least 12 months earnings. As South Sudan found in 2008-9, when shocks to the oil market cut revenue by 40%, a small buffer is not enough.

The other element of sustainability is longer-term, and revolves around reserve exhaustion. Estimates of sustainable spending out of oil income for resource exporters are usually based on some version of “permanent income”, calculated at an estimate of long-run oil prices. Part of the oil income earned is spent to cover the non-oil fiscal deficit and the rest is saved and invested to provide a stream of income that will last forever. Several countries, for example East Timor, use this kind of benchmarking.

Full application of the permanent income model to South Sudan, based on recent reserve estimates and recovery rates, suggests a permanent spending level half or less of spending levels in 2010 and 2011 and a very large build-up of savings. Few developing countries manage to achieve such a level of savings, and there are some debates on the extent to which the model is applicable to a poor country with many urgent needs. But the principle of a fiscal rule is a good one for a resource exporter, and the permanent income benchmark is useful to keep it in mind as an indicator of where spending is relative to potential revenues.

Saving is of course even harder if budgets and reserve and sovereign wealth funds are not managed transparently. No group will want to have resources to which it has a claim set aside in a fund liable to be plundered by others. A country like South Sudan, with limited capacity, might consider contracting out the management of a reserve fund to a well-respected institution, with a mandate to report in a fully public and transparent manner.

How large is South Sudan’s potential resource wealth? One of the main benefits of



resolving the current situation is to create a window to find more oil. Many mineral-producing countries have seen large increases in proven reserves in the last decade, fuelled by improved geo-scientific mapping, exploration and technical advances in mining, processing and higher recovery rates. In the period 2000-2008 the rent value of oil discoveries globally totalled \$38 trillion. Most minerals have seen large reserve increases. Naturally, fiscal policy cannot be based on spending resources not yet discovered. Also, the boom in discovery coupled with slowing growth in demand for minerals means that we cannot take high prices for granted looking ahead. But estimates of national wealth suggest that most of the undiscovered mineral reserves are in developing countries. Even though poor countries are more resource-dependent than rich ones, their proven reserves are less per square km because there has been so much less exploration.

*“Poor capacity, corruption and the politicization of spending have resulted in unproductive and poorly managed programs”*

There have been sizeable finds of minerals, hydrocarbons and gas in many countries, in East, West and Southern Africa. Tullow Oil recently announced a new find in Ghana; natural gas promises to transform the energy balance of East Africa. But Africa has not been the main focus of discovery, probably because exploration is costly and the risks seen in many countries and areas are too high to encourage investment. One of the benefits of normalizing the situation of South Sudan is to provide an opportunity for further exploration and development using modern technology. At the least, recovery rates could be boosted from their current low values. If commercially warranted, new reserve finds could justify a new pipeline to the East or South, or both. However, investors have many options to explore and develop new resources, and they cannot be expected to enter in force under very uncertain conditions.

**Spending Quality:** One criticism of the permanent income approach is its focus on savings abroad rather than domestic investments. It has been argued that for capital scarce economies like South Sudan the returns may be higher on domestic investments than in international capital markets. This suggests reformulating the rule to include a focus on public investments, for example in infrastructure and education. The non-oil primary deficit can then be higher than the permanent spending level from the oil reserves, provided that extra spending is allocated to such

development expenditures with a high return.

*“South Sudan will also need to reorient spending from salaries, including in the area of security, to development, and from Juba to the wider country”*

In practice, however, the scale-up of productive domestic investments has been problematic in many oil-rich countries. Poor capacity, corruption and the politicization of spending have resulted in unproductive and poorly managed programs. Recent comparative research by the IMF shows that public investment programs are less well managed in oil exporting countries than in other developing countries. Construction especially is known for being susceptible to mismanagement and corruption. Contracts are large, and often complex and difficult to monitor. Key decisions are made by a few individuals, often well connected, and with little oversight and transparency. South Sudan should not scale up domestic investments before investing in the ability to manage them well. This capacity can take some years to build up. External development partners can help.

South Sudan could consider separating out investment financing from execution through the use of escrow funds. Roads, for example, are costly but essential for the development of the country. If 10% of public spending in 2010 and 2011 had been put aside to fund roads, it could have financed about 800 km of two-lane all-weather surfaced road through a well-managed investment program. Donors could be asked to co-finance such investments, and they could provide independent oversight to help ensure quality spending, with payment to contractors conditional on delivery. Increasingly, investment programs funded by donors are moving towards this results-driven model.

*“Transparent, uniform transfers offer a way for the population to share in oil wealth and they can help avoid other forms of subsidies that cause great distortions”*

South Sudan will also need to reorient spending from salaries, including in the area of security, to development, and from Juba to the wider country. This will be a sensitive issue. Many have contributed to the emergence of South Sudan as a nation and see public employment as a reward for services rendered. It will not be easy to demobilize and lay off large numbers of people, especially as the private sector is small and not able to absorb large numbers at once. New technology may be able to help manage this process. Many countries have begun to use biometric identification technology for development purposes, such as delivering transfer payments, health services and increasing access to finance, as well as for strengthening their systems of national IDs. The technology can be used to help rationalize public payrolls, weeding out ghost workers and duplicate payments. It can also be linked with smartcards, to provide phased severance payments to demobilized security forces or laid-off public employees. One example is in the DRC, where demobilized ex-combatants received monthly severance payment for 11 months. Liberia and other countries have used this type of system to trim public payrolls also. Often the savings have been very substantial, enough to cover back the cost of the technology quite quickly. This step could also form the first stage of a valuable national ID system that can help to deliver government services and transfers more widely. Pakistan's national ID was used, together with smartcards, to deliver assistance to a million households devastated by floods. An audit of the program showed that the people due to receive the money indeed received it, and there was very little corruption and leakage. South Sudan cannot create such systems immediately, but could begin to plan ahead to implement them where savings are greatest.

Should countries give all of their oil revenues back to their citizens, the ultimate

*“South Sudan might want to consider temporary pensions to enable citizens to transition from public sector employment to more productive activities”*

owners of the resources, and tax back transparently to fund public spending? Some argue that if a government is able to rely on easy oil revenues a resource-rich country will not develop the mechanisms needed to establish a government that is accountable to its people. Historically, taxation has played a central role in the creation of capable and accountable modern nation-states, and there is considerable empirical support for the proposition that high fiscal rents lead to less accountable government. Following this argument, citizens have an incentive to monitor the use of funds. For South Sudan, with its limited administrative reach including payments and taxation, such an approach may seem unrealistic. However it does emphasize the importance of the key issue of governance and that rents in the hands of an unaccountable government are arguably worse than no rents at all. Transparent, uniform transfers offer a way for the population to share in oil wealth and they can help avoid other forms of subsidies that cause great distortions. Iran has created 20 million bank accounts and transferred a share of oil income to families as compensation for raising domestic energy prices. Some countries with young populations are considering education vouchers as a means to enable citizens to share in oil wealth. As noted above, South Sudan might want to consider temporary pensions to enable citizens to transition from public sector employment to more productive activities.



*“South Sudan will need to take steps to diversify its economy away from exclusive dependence on oil”*

### Economic Diversification

More than perhaps any other country, South Sudan will need to take steps to diversify its economy away from exclusive dependence on oil. Given its endowments and comparative advantage, the most likely sectors are resource-based, agriculture or possibly other minerals. With very high transport costs, agro-based output is likely to be for domestic use in the first years, substituting for the current very high level of imports. As in other African countries, there may also be opportunities in high-value crops, able to be exported by air, but this would require major investments and improvement in logistics.

Diversification has been a goal of virtually all resource exporters, but only a few have managed to develop strong alternative sectors. It requires very good macroeconomic management, to limit the booms and busts that inhibit private

*“For South Sudan, diversification raises many policy challenges, including spending quality and streamlining regulation”*

investment in traded sectors, as well as flexible exchange rate management, to devalue when needed for competitiveness. Most important, it requires a strong focus on public investments that bring down costs for the non-oil traded sectors and also build human capital to raise productivity. Malaysia, Indonesia and Chile all offer good examples. Investments are not enough; there also has to be an open entry policy, to encourage new businesses and entrepreneurs. Algeria, for example, has a stagnant non-oil economy because resource rents from oil and gas have been captured by an entrenched business class with close ties to government.

For South Sudan, diversification raises many policy challenges, including spending quality and streamlining regulation. Infrastructure investment will only contribute towards diversification if it is effectively implemented and maintained to provide services.

Otherwise, the investments will just add to demand pressure, appreciate costs and the exchange rate, and discourage new investments. The country will need to listen to the views of the private sector, including potential entrants, and benchmark its performance on the business climate against other countries, many of which will be competing for the same investors. There are substantial monitoring and research needs here, to understand where the country is relative to its peers, and where it could aim to be.

## Conclusion

South Sudan can take comfort from the fact that it has many opportunities as well as challenges. Other countries have faced some similar challenges, and some countries have managed to address them successfully. On the other hand, many others have not, and it is useful to look at both positive and negative lessons. Even in the current, very difficult, situation, it is not too early to begin preparing for the longer-term.

## About the authors

*Alan Gelb* is a senior fellow at the Center for Global Development. His recent research includes aid and development outcomes, the transition from planned to market economies, the development applications of biometric ID technology, and the special development challenges of resource-rich countries. He was previously director of development policy at the World Bank and chief economist for the bank's Africa region and staff director for the 1996 World Development Report "From Plan to Market."

The International Growth Centre  
(IGC) aims to promote sustainable  
growth in developing countries  
by providing demand-led policy  
advice based on frontier research.

---

Find out more about  
our work on our website  
[www.theigc.org](http://www.theigc.org)

For media or communications  
enquiries, please contact  
[mail@theigc.org](mailto:mail@theigc.org)

Follow us on Twitter  
[@the\\_igc](https://twitter.com/the_igc)

International Growth Centre,  
London School of Economic  
and Political Science,  
Houghton Street,  
London WC2A 2AE