Can the Petroleum Fund Exorcise the Resource Curse from Timor-Leste?

By Charles Scheiner, 24 August 2014

Abstract
Oil and gas exports provide more than 95% of Timor-Leste's state revenues and three-fourths of GDP, making the young nation one of the most petroleum-dependent countries in the world. Although this fuelled 'double-digit' annual growth in non-oil GDP from 2007 through 2011, poverty and inequality are also increasing. Current development plans are unlikely to rescue Timor-Leste's people from the 'resource curse', which distorts planning, governance, decision-making and politics, leading to neglect of non-petroleum investments, especially agriculture and human resources.

Income from exporting non-renewable petroleum wealth is channelled through a Petroleum Fund which contains US$17 billion. Although Timor-Leste's currently active oil and gas fields may be dry by 2020, many believe that earnings from Petroleum Fund investments will continue to pay for state activities. Unfortunately, La'o Hamutuk's model shows that the Petroleum Fund may be empty within five years after that.

The prospect that the Petroleum Fund could be gone in a decade underscores the urgency to develop Timor-Leste's non-oil economy, increase domestic revenue and use public money wisely. In the end, the Petroleum Fund may have created an illusion of financial security that allowed avoiding difficult decisions and challenging tasks.

Oil and gas comprised 78% of Timor-Leste's Gross Domestic Product (GDP) in 2012 (RDTL DGS 2014a) and provided more than 96% of state revenues in 2013. Most of the money from selling off non-renewable petroleum wealth has been saved in a Petroleum Fund (PF), which contains US$17 billion. People expect the PF to finance state activities after the oil and gas fields are exhausted, which could happen within six years, but the PF may be empty by 2025. Timor-Leste has about a decade to use its finite oil resources to underpin long-term prosperity and development.

This article gives an overview of the consequences of Timor-Leste's reliance on its limited oil and gas reserves, focussing on its impacts on economics and decision-making. It explores how effectively Timor-Leste's Petroleum Fund (PF), a sovereign wealth fund established in 2005 with extensive guidance from international agencies, can prevent or ameliorate some of the most serious consequences of the 'resource curse' – the negative impacts of non-renewable resource wealth on citizens of most countries which depend on exporting petroleum and mineral wealth.

The article draws on research and analysis by the Timor-Leste Institute for Development Monitoring and Analysis, also known as La'o Hamutuk. La'o Hamutuk is an independent Timorese civil society organization founded in 2000 to support the country's political and economic sovereignty, from the perspective of social and economic justice. It analyses reports and proposals from government, international agencies and other sources, compares them with observations and other data, and uses its findings to enhance public and leaders' understanding of the context and likely consequences of policy options. In addition to using published documents, La'o Hamutuk consults with officials, experts, practitioners and researchers. La'o Hamutuk also advocates for policies and programs which will benefit current and future generations of Timor-Leste citizens.

Published statistics and international comparisons involving Timor-Leste are often inaccurate or inconsistent, frequently confusing total GDP with non-oil GDP, even though it is four times larger (La'o Hamutuk 2014b; compare RDTL DGS 2013 with RDTL DGS 2014a). This makes it challenging to

---

1 The author is a researcher at La'o Hamutuk (The Timor-Leste Institute for Development Monitoring and Analysis), Dili, Timor-Leste. Telephone: +670-332-1040. Email: peacefulsystems@gmail.com. Website: http://www.laohamutuk.org. An earlier version of this paper was presented at the ANU Timor-Leste Update conference in Canberra in November 2013, and an abridged version was published by ANU SSGM as In Brief 2014/29 (Scheiner 2014a). An edited version of this paper will be published by Australian National University.

2 During 2013 Timor-Leste received US$3,050 million from oil and gas revenues and $865m from investing the Petroleum Fund, including unrealized stock price changes (Central Bank of Timor-Leste 2014). Non-oil state income totaled US$147 million, of which a significant portion was paid by the state to itself (RDTL MoF 2014).
understand whether contradictions and retroactive revisions come from improved data or methodology, political motivation, or agencies’ reluctance to differ with the Government.3

Oil swamps the economy.

Timor-Leste relies on its petroleum exports more than every nation except South Sudan, Libya and perhaps Equatorial Guinea. However, this dependency is not due to vast oil and gas reserves or high production rates, but because the non-petroleum economy, which scarcely existed when independence was restored in 2002, is still very small.

Although 22% of Timor-Leste’s five billion (US) dollar Gross Domestic Product is categorized as ‘non-oil,’ about half of this is generated by state spending for public administration, procurement and infrastructure construction. Since oil money provides the lion’s share of state revenues, this will evaporate when the wells dry up. The private sector and consumer-driven portions of economy – agriculture, manufacturing, and local commerce for businesses and individuals – averages less than two dollars per citizen per day, although most citizens make do with far less than the average.

<table>
<thead>
<tr>
<th>Table 1: Gross Domestic Product in 2012 (million USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Gross Domestic Product (GDP)</td>
</tr>
<tr>
<td>GDP from Petroleum Sector</td>
</tr>
<tr>
<td>Non-oil GDP</td>
</tr>
<tr>
<td>Of which: Productive GDP (agriculture and manufacturing)</td>
</tr>
</tbody>
</table>

Source: RDTL DGS 2014a

Government officials are proud that the non-oil GDP is growing at ‘double-digit rates’ (RDTL Prime Minister 2014, 3; La’o Hamutuk 2014b; Global-Insight 2014, 6), but virtually all of this growth represents rising state spending. The productive parts of the economy – agriculture and manufacturing – are only 4% of total GDP. After adjusting for global inflation and population, these sectors increased an average of 4.9%/year between 2007 and 2012 (RDTL DGS 2014a), less than two-thirds as much as consumer prices increased (RDTL DGS 2014b). By comparison, public administration and construction (largely paid for with public money) averaged 28.5% and 41.5% real annual growth per capita during the same period (RDTL DGS 2014a).

For example, in December 2013 the IMF estimated that Timor-Leste’s total GDP increased by 5.7% between 2011 and 2012 (IMF 2013), but Government statistics eight months later (which may be reflected in future IMF reports) said that it had declined by 10.4% (RDTL DGS 2014a).
Nevertheless, state agencies and the small middle and upper classes have money to spend, and the absence of convenient local products leads them to purchase goods and services from overseas, as shown in Table 2.

**Table 2: Balance of external trade in 2013**

<table>
<thead>
<tr>
<th>Goods</th>
<th>(million USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>$694</td>
</tr>
<tr>
<td>Exports (excluding offshore oil and gas)</td>
<td>$18</td>
</tr>
<tr>
<td><strong>Total trade deficit</strong></td>
<td><strong>$1,258</strong></td>
</tr>
</tbody>
</table>

**Sources:** RDTL DGS 2014 (goods); Central Bank of TL 2014a (services)

Unfortunately, trade is less diverse and more import-heavy than the numbers show. More than 90% of exported non-oil goods are coffee, whose value fluctuates with the weather and the global market. A large part of the exported services are tickets on international airlines sold through travel agencies in Timor-Leste.

Prioritizing short-term purchases over sustainable national development results in extreme import dependency. More than half of state spending immediately goes abroad, and individuals make little effort to spend in the local economy. Chickens are imported from Brazil, rice from Vietnam, eggs and beer from Singapore, fruit juice from Cyprus, onions from Holland, garlic from China, milk from Australia... In 2013, more than US$180 million went to Indonesian suppliers for everything from water to candles to cigarettes to instant noodles to sugary drinks to canned fish. Although a few agencies advocate ‘local content,’ almost nobody weighs economic sovereignty when deciding what to buy. Current and pending free trade policies make it even harder to cultivate local production. When the oil and gas revenues end, there will be little cash to pay to foreign suppliers, and imports will become unaffordable. Without local food production, people will starve.

---

4 Recent RDTL Directorate-General of Statistics trade reports erroneously include U.S. dollar notes and Portuguese-minted coins as imports; they are not included here.
Counting people rather than dollars tells a different story. Timor-Leste is an agricultural country, and most households live mainly from subsistence farming.

The formal economy, both public and private, employs less than a third of the working-age population. Only 10% of the working-age population works for companies, and less than one-fiftieth of those jobs are in the petroleum industry. As the IMF explains, ‘The oil and gas sector is the mainstay of the economy. … However … the sector directly accounts for virtually no on-shore employment. Its economic impact is entirely via government spending’ (IMF 2013).

Oil fuels the state machinery.

As Table 3 shows, more than 90% of Timor-Leste’s government revenues are from oil.

### Table 3: Sources of income in the 2014 General State Budget

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Amount (million USD)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue from oil and gas exports</td>
<td>$1,443</td>
<td>61%</td>
</tr>
<tr>
<td>Return on Petroleum Fund investments</td>
<td>$770</td>
<td>32%</td>
</tr>
<tr>
<td>Non-petroleum (domestic) revenue sources</td>
<td>$166</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total projected revenues</strong></td>
<td><strong>$2,380</strong></td>
<td></td>
</tr>
<tr>
<td>Withdrawn from the Petroleum Fund during 2014</td>
<td>$903</td>
<td>60%</td>
</tr>
<tr>
<td>Withdrawn from the Petroleum Fund before 2014 (balance carried over)</td>
<td>$400</td>
<td>27%</td>
</tr>
<tr>
<td>Withdrawn from the Petroleum Fund after 2014 (borrowing to be repaid in future)</td>
<td>$31</td>
<td>2%</td>
</tr>
<tr>
<td>Non-petroleum (domestic) revenues</td>
<td>$166</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Total budgeted sources for financing state expenditures</strong></td>
<td><strong>$1,500</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: RDTL MoF 2014a

About US$25 million of the US$166m in ‘domestic revenues’ will come from taxes paid by the state to itself (such as import taxes paid by companies working on state-financed projects). Another US$19 million will be the gross receipts of the highly-subsidized public electricity system, which recovers only 20% of its operational costs from users and uses oil income to cover its operating deficit and capital outlays.

Policies neglect other domestic revenues; a 2008 ‘tax reform’ slashed import, wage and business taxes in hopes that this would encourage foreign investment and reduce prices to consumers. As a result, Timor-Leste now has the third-lowest Total Tax Rate in the world, one-fourth of the global average (World Bank/PWC 2013).
Can the Petroleum Fund Exorcise the Resource Curse from Timor-Leste? C. Scheiner

The Sovereign Wealth Fund saves petroleum revenues.

Almost all of Timor-Leste’s oil and gas income is deposited into the Petroleum Fund (PF), which serves as a buffer between this income and annual expenditure. This allows the state budget to respond to public needs, rather than oil price and production fluctuations. 40% of the PF is invested in the global stock market, with the balance in bonds, mostly from the U.S. government. Returns from these investments are re-deposited into the PF. When the PF was being created in 2004-2005, designers intended that these earnings would replace oil revenues after the fields run dry (Central Bank 2014; La’o Hamutuk 2013).

Every year, the Ministry of Finance calculates an Estimated Sustainable Income (ESI) benchmark equal to 3% of the current Petroleum Fund balance added to the net present value of expected future revenues from oil and gas fields with approved development plans. The ESI informs the decision of how much to withdraw from the PF each year to finance the state budget, although it was exceeded every year from 2008 to 2012, and will be again from 2014 onwards (RDTL MoF 2014b).

The ESI does not reflect population. It was designed to spend more per person now than later, investing in Timor-Leste’s future and being supplemented by other revenues over time. If future oil revenues and investment returns follow ESI’s prudent projections, the ESI would be the same amount every year, regardless of population, local inflation (which has been far above global rates), improved state services or growing expectations. Unfortunately, overspending ESI has lowered the balance in the Petroleum Fund.

At present, these are the Bayu-Undan and Kitan fields in the Joint Petroleum Development Area, from which Australia takes 10% of the revenue. The Greater Sunrise development plan has not yet been approved, so it is not part of the ESI.
Can the Petroleum Fund Exorcise the Resource Curse from Timor-Leste?  

C. Scheiner  

Page 6

Fund, reducing its future investment earnings. In fact, the PF goal of using return from investments to finance state activities for decades after the oil and gas are gone is unlikely to be achieved, due to transfers above ESI, rapid budget escalation, revision of the Petroleum Fund Law, less prudent price projections and lower oil production and income.

Figure 4 shows how much money Timor-Leste’s state budget has received and spent since the restoration of independence in 2002. The narrow bars show actual revenues through 2013 and budgeted revenues during 2014. The lowest two segments (solid pink and purple) represent withdrawals from the Petroleum Fund, while the upper segment (stippled blue) is the balance carried over from excess withdrawals from the PF in prior years. However, the blue (carryover) and yellow/red (borrowing, which started in 2014) also mainly come from the PF in the past and the future.

Large oil revenues began in 2006; they have been declining since 2012. They pay for virtually all state expenditures, which grew more than 25% per year from 2008 and 2012, faster than every nation except Zimbabwe.

The principal source of income is the Bayu-Undan oil and gas field, operated by U.S. oil giant ConocoPhillips. In 2013, the company downgraded its estimate of future revenues to Timor-Leste by 49%, with production to end four years earlier than previously estimated (RDTL Ministry of Finance 2014a). Partly in response, for the first time in history, the Government withdrew less than the Parliamentary limit (which had been set at ESI) from the Petroleum Fund and financing state activities with the cash balance accumulated in prior years. Although Timor-Leste hired independent experts in hopes that ConocoPhillips was wrong, they confirmed the company’s predictions.

The proposed 2014 budget allowed withdrawal of US$903 million from the Petroleum Fund, well above the US$632 million ESI. La’o Hamutuk and Parliament’s Committee on Public Finances believe that this is unnecessary (La’o Hamutuk 2013b; RDTL Parliament 2013), but the enacted budget reflected the Government’s proposal.

---

6 The 2013 budget authorized US$787 million to be withdrawn from the Petroleum Fund, equal to the Estimated Sustainable Income, but the Government withdrew only US$730m because much more had been withdrawn during 2012 than the government could spend (La’o Hamutuk 2013a). Nevertheless, 2013 ended with US$634m in the Treasury account, more than triple the cushion the Government says it needs.
Spending grows quickly, but not always wisely.

State expenditures are shown as the wider bars in Figure 4, with the tan upper segment representing donor contributions which are not included in the state budget. The next two (red) segments represent physical infrastructure. Infrastructure construction absorbed half of state expenditures while the electricity system was being built in 2011 and still takes one-third of the budget. Although spending on large projects has slowed due to delays, it will resurge if projects on the drawing board, including Dili airport, Tibar Port, the Oecusse Special Economic Zone and the Tasi Mane petroleum infrastructure project are built.

Spending on recurrent costs (salaries, goods, services, public grants) continues to increase about 20% per year, even as the total budget has shrunk since 2012.

Although allocations for health and education are gradually increasing, Timor-Leste still invests about 40% less of its budget on these human resources than well-managed developing countries (UNDP 2011). Most children born during the post-1999 'baby boom' are not getting adequate nutrition or education, which will have severe, long-term consequences for the nation's future.

Agriculture, which sustains most Timorese households, receives only 2% of 2014 state spending, less than it got in 2013 (La’o Hamutuk 2014).
The resource curse has many faces.

Timor-Leste’s economy and politics are typical of the ‘resource curse’ (Neves 2013), a set of conditions, choices and consequences that almost always makes citizens of extractive-export-dependent countries worse off than people in countries with little oil or mineral wealth. In general, the ‘resource curse’ results from easy access to non-renewable wealth, which is seen as a windfall which can be freely spent on short-term desires, rather than strategic longer-term development. Since there are few taxpayers demanding that their money be used wisely, corruption, conflict and opacity often occur, although Timor-Leste has taken some steps to avert them. At the end of the day, when all the mineral wealth has been converted to cash and spent, the opportunity to develop a sustainable, self-sufficient economy may also have been squandered.

The resource curse is not magic or metaphysical – it occurs in almost every impoverished nation whose economy is dominated by exporting non-renewable resources, including Nigeria, Ecuador, the USSR, Gabon, Iraq, Congo, Equatorial Guinea, Papua New Guinea and Nauru. Oil and gas exporters are the most vulnerable, due to the volatility of the international market, avarice of the petroleum industry, and the industrialized world’s addiction to petroleum. With most wealth deriving from extractives and state spending, rent-seeking -- working to get a piece of this money, rather than to produce something -- becomes dominant. Although one form of this is corruption, most resource-curse-driven behaviour is legal and accepted, albeit more fundamental and widespread.

Timor-Leste protected itself against one consequence of the resource curse by using an international currency; the U.S. dollar safeguards against runaway inflation and ‘Dutch disease’. However, inflation in Timor-Leste has been much higher than in our trading partners, due to the lack of local productive capacity and the supply of money exceeding the supply of imports.

Furthermore, the international oil market is priced in U.S. dollars, so when a falling dollar makes oil and commodity prices rise, state revenues also go up. This partial protection means that when the dollar declines relative to exporters’ currencies the state has more money, but citizens also have to pay higher prices.

Available wealth attracts shady characters

A cash-rich government with limited experience and safeguards is a tempting target for scammers, tax-evaders, thieves and opportunists from all over the world, as shown by these examples (La’o Hamutuk 2012b).

In 2009, Malaysian Datuk Edward Ong promised to build the Pelican Paradise luxury resort just west of Dili. Ong then asked the Minister of Finance to deposit US$1.2 billion from Timor-Leste’s Petroleum Fund in a blocked bank account controlled by Asian Champ Investment, Ltd, promising to pay 7.5% interest and to return the money in one year. His proposal was taken seriously, and the Minister travelled to London with the President of Timor-Leste’s Investment Advisory Board (IAB) for further discussions. In the end, prudence prevailed, and Timor-Leste declined to give the apparently fictional company a billion dollars. The IAB noted that ‘worldwide there have been a number of reported cases where institutional investors have fallen prey to fraudulent schemes under arrangements involving apparently secure deposits in “blocked accounts” at reputable banks, higher than market interest rates, a rapid decision-making process, and little if any documentation concerning the parties making the offer’ (RDTL Petroleum Fund Investment Advisory Board 2009; La’o Hamutuk 2010). Pelican Paradise was abandoned before construction started.

On 19 June 2014, U.S. Federal agents arrested Nigerian-born U.S. lawyer Bobby Boye, who worked in Timor-Leste from 2010-2013 advising the Ministry of Finance on petroleum tax collection (La’o Hamutuk 2014f). U.S. prosecutors charged Boye with seven counts of wire fraud, alleging that he created a fake company Opus & Best and used his influence to have the Timor-Leste government pay O&B US$3.5 million. Boye’s trial is pending in the United States, and many suspect that others were involved in his crimes, either through conspiracy or negligence. It is clear that both the Norwegian aid program which initially hired him and the Ministry of Finance which extended his employment and awarded contracts to O&B failed to exercise due diligence (La’o Hamutuk 2014e), as Boye has a long record of criminal and financial malfeasance (Aftenposten, 2014).

Timor-Leste’s state owned petroleum company, TimorGAP, has spent tens of millions of dollars and signed contracts for billions during its three years of operation, but it has never published an annual report. Although no criminal charges have been brought, La’o Hamutuk’s August 2014 suggestion that the Court of Appeals conduct an audit of TimorGAP has been well-received by people both inside and outside the petroleum sector (La’o Hamutuk 2014h).
Some structural elements of the resource curse are nearly impossible to control, such as the ruthlessness and amorality of huge international oil companies, global and local environmental damage, invasions and civil wars, and the capital-intensive, high-skill nature of the petroleum industry. Others, however, can be overcome — although it is rare to find political leaders in any country with the far-sightedness, wisdom and courage to make the right decisions.

Timor-Leste’s history and geography make the resource curse more severe than it would be from petroleum dependency alone, including these factors:

- **Extreme poverty and underdevelopment.** Portugal did little to develop economic production or human resources, while Indonesia destroyed infrastructure and discouraged individual initiative or self-reliance. Only a small fraction of Timor-Leste’s 1.2 million people have had access to good education, entrepreneurial skills, or managerial experience.

- **Emergence from foreign rule.** Until 2002, leaders and citizens never lived under democratic self-government by rule of law. Administrative and legal structures must be built from scratch, overcoming the bad habits civil servants learned while working in and/or resisting inefficient, illegal and corrupt Indonesian and Portuguese administrations. Citizens and leaders alike are learning how to effectively participate in a peaceful, transparent, accountable, stable, democratic society, where government with citizen consent and participation serves the public interest.

- **Recovery from prolonged war.** Many people are traumatized. Repeated unpredictable, uncontrollable interruptions to people’s lives has taught them not to plan for or invest in the future. Leaders who excelled at combating foreign occupation lack the skills for peacetime, democratic, consultative governance. Around the world, struggles over oil and minerals often lead to war and conflict, but Timor-Leste hopes that that phase of its history is over.

- **Self-interested neighbours.** Although both Australia and Indonesia claim to support the new nation, their thirst for oil and insistence on impunity belie their good will. Australia continues to occupy about 40% of the oil and gas reserves that should belong to Timor-Leste under current international law (La’o Hamutuk 2014a).

This toxic combination makes it almost impossible to develop a sustainable, equitable economy. PowerPoints substitute for plans; the Strategic Development Plan 2011-2030 (RDTL 2011) is an enticing, impossible dream. In search of showy quick solutions, planning neglects the unglamorous but essential tasks of alleviating poverty, replacing imports and working toward food sovereignty.

At present, the cash-flush government has almost no taxpayer-voters demanding financial accountability. The elite and some constituencies believe that they are entitled to a disproportionate share of public resources, a pattern set by rewarding heroes of the liberation struggle and ‘buying peace’ to neutralize potentially troublesome groups or political opponents. Instead of the give-and-take which constrains state spending in ‘normal’ countries, the whims of politicians and promises of salesmen are using up Timor-Leste’s finite oil wealth.

Multi-hundred-million-dollar, multi-year infrastructure projects like the Tasi Mane south coast petroleum infrastructure project and the Special Economic and Social Market Zone in Oecusse are initiated without realistic estimates of their total cost, competitive advantage or economic viability (La’o Hamutuk 2013d; La’o Hamutuk 2014g). Adding to the risk, loans from foreign institutions (sometimes disguised as Public-Private Partnerships) incur hundreds of millions of dollars in debt which will have to be repaid after the oil and gas is gone (La’o Hamutuk 2013c; La’o Hamutuk 2014d).

When a decision-maker has access to money, it seems like the solution to every problem. It’s easier to buy a scholarship than to build a quality university -- the 2014 budget for overseas scholarships is 35% more than the appropriation for the National University of Timor-Leste, which educates four times as many students as will receive the scholarships (RDTL MoF 2014a). Similarly, the state pays for a few well-connected people to fly to overseas hospitals, but most citizens cannot access decent health care. Roads and bridges in the capital used by VIP visitors are repaved frequently, while rural communities struggle with impassable tracks and rivers. Airport and highway construction could consume a billion dollars of oil money – yet very few Timorese people will ever fly or own a car. Hundreds of millions
more will build a container port which can handle an eight-fold increase in imports -- but without oil money, how will Timor-Leste pay for the imports or guarantee the investor’s expected return?

More ominous, petroleum dominates planning, diverting attention from sustainable, equitable, realizable development paths. Because oil is where the action is today, the most persuasive, creative and ambitious people choose to work in petroleum regulatory agencies, oil corporations and the TimorGAP state-owned oil company. They persuade budgeters to award millions of dollars for concept studies, ‘pre-FEED’ designs and promotional presentations. When the resulting proposals are compared with those for agriculture, tourism or import-substituting manufacturing, the playing field is tilted.

Similarly, the best and brightest university students major in petroleum engineering, similar to the rent-seeking that led many in the West to become stockbrokers and lawyers during the bubble before the 2007 financial crisis (Stiglitz 2014, chapter 2), but few jobs exist for inexperienced graduates in the capital-intensive petroleum industry. As a result, less glamorous but more necessary fields like civil engineering, education, business development, management, water supply, sanitation, nutrition and health care are deprived of both financial and human resources.

This petro-state doesn’t have much petrol.

If Timor-Leste’s oil reserves were as large as Brunei’s or Saudi Arabia’s, these problems could be drowned in dollars. Unfortunately, geology has not been that generous to this new nation. Even if the Greater Sunrise field is developed with a Liquefied Natural Gas (LNG) plant in Timor-Leste and Australia taking only half of the upstream revenues, total expected oil and gas revenues be inadequate to support one (current) dollar per person per day of public spending over the next four decades. This would be less than one-third of the 2014 State Budget, which pays for services that nobody would consider adequate over the long term. If the balance in the Petroleum Fund goes up and the stock market booms, additional revenue from investments could help a little, but recent patterns make this improbable (Scheiner 2014).

Oil revenues peaked in 2012, and Timor-Leste has already received more than 2/3 of the expected income from its only two producing oil and gas fields. Kitan production will end in 2016 and Bayu-Undan by 2021 (RDTL MoF 2014; La’o Hamutuk 2014c). By comparison, Australia is richer in petroleum than Timor-Leste, with larger future potential. Indonesian reserves are smaller for its population, but they are being pumped more slowly than Timor-Leste’s.

<table>
<thead>
<tr>
<th>Known oil and gas reserves per person</th>
<th>Timor-Leste 50% Sunrise</th>
<th>Timor-Leste no Sunrise</th>
<th>Australia 50% Sunrise</th>
<th>Australia no Sunrise</th>
<th>Indonesia</th>
<th>Brunei</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (small area, explored for decades)</td>
<td>700 barrels</td>
<td>230 barrels</td>
<td>1,140 barrels</td>
<td>1,090 barrels</td>
<td>87 barrels</td>
<td>6,780 barrels</td>
</tr>
<tr>
<td>How long reserves will last at 2013 production rates</td>
<td>14 years</td>
<td>4.6 years</td>
<td>64 years</td>
<td>63 years</td>
<td>29 years</td>
<td>23 years</td>
</tr>
</tbody>
</table>

Sources: La’o Hamutuk estimates, Santos 2014 and ANP 2014 for Timor-Leste; BP 2014 for other countries

Timor-Leste’s petroleum officials believe that Timor-Leste has large undiscovered oil and gas deposits, and that the companies are too pessimistic (Timor Post 2014). During the discussion of a preliminary version of this paper in November 2013, National Petroleum Authority President Gualdino da Silva said ‘[Timor-Leste] is a proven petroliferous zone. It is also a new frontier; we need more production, we need more discoveries. How could one believe in a conclusion based only on the two production fields? The country is still in an early stage, in its infancy, of researching and discovering more oil and gas. It is too early to reach that conclusion’ (ANU 2013).

---

7 In 2007, Timor-Leste tried to continue oil production from the Elang-Kakatua field after ConocoPhillips decided it was no longer worth operating. They were unable to attract another company.
Although anything is possible, the country’s small and constrained land and sea area, geological structures, and 120-year history of oil exploration make significant additional reserves unlikely. The first Sunrise test well was drilled in 1974; Kitan is the only commercial field discovered since the flurry of exploration after the 1991 Timor Gap Treaty, and more than a dozen dry test wells have been drilled since the Indonesian occupation ended in 1999. During Timor-Leste’s most recent offshore licensing rounds in 2006, no company which had previously explored the area submitted a bid. Since then, about 90% of the contract areas awarded in 2006 turned out not to be commercial, and the contract holders have relinquished them (La’o Hamutuk 2014i).

There isn’t much time.

Timor-Leste does not have enough oil and gas to sustain the country for very long. If the non-oil economy hasn’t developed when the last well runs dry in six years, many more people will join the growing majority struggling to live under the poverty line. When state revenues can no longer cover expenses, Timor-Leste will fall into austerity, with drastic implications for the state and its citizens.

Combined with good planning, Timor-Leste’s Petroleum Fund could help support sustainability. Although documents and officials often refer to inter-generational equity, suggestions for more serious efforts to develop alternatives to petroleum (UNDP 2011; Scheiner 2011; La’o Hamutuk 2012; Petroleum Economist 2013) were rebuffed (RDTL Spokesperson 2011; RDTL Spokesperson 2013) until recently (RDTL MoF 2013c; RDTL MoF 2013d; RDTL MoF 2014b). Nevertheless, Timor-Leste’s government continues to boast about its strong, growing, inclusive economy (Global Insight 2014), although it is unclear whether policy-makers believe their own advertising.

However, others are beginning to understand the urgency. After years of echoing the government’s petroleum-dominated priorities, the World Bank highlighted the need for non-petroleum economic development in its 2013-2017 Country Partnership Strategy (World Bank 2013). When President Taur Matan Ruak promulgated the 2014 State Budget in early February, he wrote to Parliament:

> Once again, I am concerned about the excessive dependency of government revenue on the Petroleum Fund. I am absolutely convinced that it is urgent to correct this situation. ... I believe that it is necessary to adopt active policies to diversify economic development...’ (RDTL President 2014).

La’o Hamutuk and others in civil society have encouraged this course for more than a decade (La’o Hamutuk 2002; La’o Hamutuk 2005a; Scheiner 2011; Scheiner 2013; FONGTIL 2013). In 2012, we began to estimate Timor-Leste’s future state revenues and expenditures based on current trends, external factors and anticipated policy choices (La’o Hamutuk 2012; La’o Hamutuk 2012a). The spreadsheet model is online and frequently updated, part of an ongoing effort to encourage evidence-based decision-making (Scheiner 2014).

The model uses an engineering approach, based on causality and Timor-Leste history, rather than correlations with other countries. It does not try to simulate the macro economy and therefore does not estimate GDP, inflation, poverty or trade. Rather, it projects how much the state will receive and spend, based on oil and gas receipts, investment returns, domestic revenues and policy decisions about recurrent spending, megaprojects, borrowing, Sunrise development and other factors.

The model uses data and estimates from a variety of sources, including state budgets and executed expenditures (RDTL MOF 2013; RDTL MOF 2013a; RDTL MOF 2013b; RDTL MOF 2014; RDTL MOF 2014a), population projections (RDTL DGS 2013b), oil price projections (US EIA 2013) and La’o Hamutuk’s calculations of oil and gas production and debt repayments based on information from oil companies and lenders. Detailed description of the model’s outputs and suggestions of what should be cut after Timor-Leste runs out of money are beyond the scope of this paper.
Figure 6 shows the model’s baseline scenario, based on ‘best-guess’ assumptions of what is likely to happen and too optimistic for prudent planning. It uses higher oil prices than the Ministry of Finance uses to calculate the ESI, and assumes a better return on Petroleum Fund investments than they earned in 2012-2013.

With these assumptions, spending exceeds oil and interest income in 2019, and the Petroleum Fund begins to shrink. By 2026, before today’s infants finish secondary school, the PF will be used up, and state spending will have to be slashed by two-thirds from desired levels, as shown by the red shaded background.

This scenario assumes that the Greater Sunrise project goes ahead soon with an LNG plant in Beaçu, so that austerity cuts are ‘only’ 66%. If the companies prevail and they build a floating LNG plant, austerity will be 70%, a little harsher. But if no Sunrise agreement is reached and the project remains stalled, Timor-Leste will have to cut 88% after 2025, closing even more schools, clinics, offices and police stations.

Changes in other assumptions can bring on bankruptcy and austerity up to three years earlier or seven years later. However, without a dramatic redirection of policy approaches, Timor-Leste’s petroleum reserves and petroleum wealth will not be able finance the state for longer than 20 years, even if the country’s wishes for Sunrise development, investment returns, and global oil market prices are granted.

Although reducing expenditure and increasing non-oil revenue could delay austerity for a few years, it is inevitable that geometrically growing budgets, increasing population and greater expectations will exhaust the country’s finite petroleum wealth. This can only be avoided with a rapid, radical shift of direction toward increasing food production, reducing imports, cutting wasteful spending and cancelling unprofitable megaprojects.

Timor-Leste must fortify its strongest resource – its people – by investing in education, nutrition, health care and rural water and sanitation. It must develop agriculture, the sector which employs most of its people, to meet basic necessities and reduce the need for imports. Timorese people of all economic classes, genders, regions and generations will have to work together to defeat the resource curse by creating an equitable, sustainable economy.

The Timorese people proved their unity and persistence through their difficult, long struggle to achieve political sovereignty over the Indonesian occupation. Achieving economic sovereignty by overcoming the petroleum occupation may be even more difficult. It will require diverse approaches, building on Timor-Leste’s strengths and prioritizing medium- and long-term sustainability.

Timor-Leste has about seven years before its remaining petroleum wealth – the only ship which can take the nation away from poverty – will have sailed. If the nation has not built a solid foundation for its non-petroleum economy, the Petroleum Fund safeguards will have failed to avert the resource curse. Sadly, the PF may have been only a delusion of economic security that enabled Timor-Leste’s officials, advisors and donors to delay difficult decisions and avoid challenging tasks.
References and Bibliography

Many documents are referenced on both La’o Hamutuk and RDTL Government websites, as Government sites frequently don’t work. All were accessed between December 2013 and August 2014.


La’o Hamutuk 2012, ‘Timor-Leste is going for broke’. http://laohamutuk.blogspot.com/2012/03/timor-leste-is-going-for-broke.html

La’o Hamutuk 2012a, ‘How Timor-Leste got Ten Billion Dollars … and how Quickly We will Spend it All’ http://laohamutuk.blogspot.com/2012/05/how-timor-leste-got-ten-billion-dollars.html
La’o Hamutuk 2012b, ‘Ten billion dollars is a tempting target’.  
http://laohamutuk.blogspot.com/2012/07/ten-billion-dollars-is-tempting-target.html

La’o Hamutuk 2013, ‘[Operation of] Timor-Leste Petroleum Fund’  
http://www.laohamutuk.org/Oil/PetFund/05PFIndex.htm

La’o Hamutuk 2013a, ‘2013 General State Budget’  
http://www.laohamutuk.org/econ/OGE13/12OGE13.htm


La’o Hamutuk 2013c, ‘Timor-Leste is going into debt’  
http://www.laohamutuk.org/econ/debt/12Borrowing.htm

La’o Hamutuk 2013d ‘South Coast Petroleum Infrastructure Project’  
http://www.laohamutuk.org/Oil/TasiMane/11TasiMane.htm

La’o Hamutuk 2013e, ‘2014 General State Budget’  
http://www.laohamutuk.org/econ/OGE14/13OGE14.htm

La’o Hamutuk 2014a, ‘Information about the Treaty between Australia and Timor-Leste on Certain Maritime Arrangements in the Timor Sea’ includes links to relevant treaties and documents.  
http://www.laohamutuk.org/Oil/Boundary/CMATSindex.htm

La’o Hamutuk 2014b, ‘The Double Digit Disappears’  

La’o Hamutuk 2014c, ‘Oil production inevitably declines’  
http://laohamutuk.blogspot.com/2014/03/oil-production-inevitably-declines.html

La’o Hamutuk 2014d, ‘Public-Private Partnerships to build grandiose infrastructure projects’  
http://www.laohamutuk.org/econ/PPP/PPPIndex.htm

La’o Hamutuk 2014e, ‘Timor-Leste has been robbed!’  
http://laohamutuk.blogspot.com/2014/06/timor-leste-has-been-robbed.html

La’o Hamutuk 2014f, ‘Making the Oil Companies Pay What They Owe’  
http://www.laohamutuk.org/Oil/tax/10BackTaxes.htm

La’o Hamutuk 2014g, ‘Special Economic Zone in Oecussa’  
http://www.laohamutuk.org/econ/Oecussi/ZEESMIndex.htm

La’o Hamutuk 2014h ‘Open letter to the Court of Appeals asking for audit of TimorGAP’  
http://www.laohamutuk.org/Oil/TimorGAP/14LHTRTimorGAPaudit5Aug14.htm

La’o Hamutuk 2014i ‘Petroleum Production Sharing Contracts’  
http://www.laohamutuk.org/Oil/PSCs/10PSCs.htm


http://www.petroleum-economist.com/Article/3159297/News-and-Analysis-Archive/Going-for-broke.html or 
http://www.laohamutuk.org/Oil/TasiMane/2013/PetroEconLeaderMarch2013.pdf


RDTL Directorate-General of Statistics (DGS) 2013a, 'External Trade Statistics, Annual Reports 2012',

RDTL Directorate-General of Statistics 2013b, 'Timor-Leste Census 2010 Volume 8: Population


results' draft, June 2014

RDTL Directorate-General of Statistics 2014c, 'Business Activity Survey of Timor-Leste 2012'


RDTL Ministry of Finance (MOF) 2013, 'Petroleum Fund 2012 Annual Report'
www.laohamutuk.org/Oil/PetFund/Reports/PFAR12En.pdf or https://www.mof.gov.tl/petroleum-
fund-annual-report-2012

RDTL Ministry of Finance 2013a, 'Fundo Consolidado de Timor-Leste, Declarações Consolidadas Anuais
Ano Fiscal de 2012.'

RDTL Ministry of Finance 2013b, 'State Budget 2013, Budget Overview' (Book 1), tables 2.5.3.1.1 and

RDTL Ministry of Finance 2013c, 'Analysis of Fiscal Sustainability in Timor-Leste,' Written in 2011 and

RDTL Ministry of Finance 2013d, 'Yellow Road workshop', May 2013. La’o Hamutuk compiled the
presentations at http://www.laohamutuk.org/econ/OGE14/13OGE14.htm#yrw; some are at

RDTL Ministry of Finance 2014, 'Budget Transparency Portal.'
frequently. Also http://www.transparency.gov.tl/english.html

RDTL Ministry of Finance 2014a, 'General State Budget 2014'. All six 2014 budget books are all at
http://www.laohamutuk.org/econ/OGE14/13OGE14.htm#docs

RDTL Ministry of Finance 2014b, 'Yellow Road Workshop 2014’ https://www.mof.gov.tl/wp-
content/uploads/2014/08/Yellow_Road_Workshop_2014.pdf

RDTL Parliament 2013, Comissão de Finanças Públicas, ‘Relatório e Parecer Sobre a Apreciação Inicial
da Proposta de Lei N.º 10/III (2ª) - Orçamento do Estado para 2014,’ page 19. Portuguese original at

RDTL Petroleum Fund Investment Advisory Board 2009, letter to Minister of Finance regarding
‘Request for an advice on depositing part of the Petroleum Fund in cash’, 18 September 2009.
content/uploads/2011/09/Petroleum_Fund_Annual_Report_2009_English.zip or
http://www.laohamutuk.org/Oil/PetFund/Reports/PFAR09XEn.pdf

RDTL President of the Republic 2014, ‘Mensagem ao Parlamento Nacional na Promulgação do