



TOWARDS ECONOMIC DIVERSIFICATION IN TIMOR-LESTE

This summary report was prepared by Bridging Peoples for Oxfam in Timor-Leste Haforsa - Strengthening Community Livelihoods Program (2015 – 2020). Haforsa program is supported by the Australian Government Australian NGO cooperation Program. The views expressed in this publication are the author's alone and are not necessarily the views of the Australian Government.

Bridging Peoples Assessment team: Dr. Deborah Cummins, Prof. Brett Inder, Mr. Edio José Maria Guterres, Ms. Laurentina 'mica' Barreto Soares and Ms. Eugenia Urania da Costa Correia.

Acknowledgments

We gratefully acknowledge comments from Mr. Fernando da Costa, Ms. Kathy Richards and Ms. Annie Sloman.

Front page photo credit

Vlad Sokhin/Panos/OxfamAUS Bobometo, Oecusse, Timor-Leste: Marcelina Aquesen and her husband Fernando Meo have received training from Oxfam to teach them new methods of growing crops better suited to the climatic conditions they experience.

Contents

Summary	01
Introduction	02
Dependency on Oil Income	03
Macro-Economic Policy Making	06
Poverty	08
Growth and Inclusive Growth	08
Employment Trends	11
Imports and Exports	13
Approaches to Development: Top Down or Bottom Up?	14
Conclusion: Forging a Path Ahead	17
Government Priorities & Budget Allocations	17
An optimistic view of the current development path	19
Execution Matters	20
The worst case scenario of the current development path	20
An Alternative Development Path	21

List of Figures

Figure 1: Sources of Funds for Government Budgets	03
Figure 2: Sectoral Priorities of the Eighth Constitutional Government	06
Figure 3: Real GDP for Timor-Leste by Sector 2001 to 2016	09
Figure 4: Real Non-Oil GDP for Timor-Leste by Sector 2001 to 2016	10

Summary

Developing the Timorese economy so that it is inclusive and sustainable is of central concern for the people of Timor-Leste. Analysis of state revenues over the past ten years show that the economy is strongly dependent on revenues from oil and gas, with only very limited domestic revenues. This has resulted in growth that is not sustainable in the long-term, with economic benefits that are more at the upper and middle end of people that earn money. While 70% are dependent on agriculture for their livelihood, there has been no real growth in this sector. Agriculture continues to be conducted mainly via subsistence farming using only basic technology, and with limited access to markets.

Analysis of state budgets over the past ten years show that while investment in large-scale infrastructure and the oil economy is very high, expenditure in other key areas such as health, education, agriculture, tourism, commerce and industry is comparatively low. When adjusted for inflation, budget allocations for these important areas are reducing. There is an opportunity for the government to diversify the economy beyond the oil sector, in order to unlock employment prospects in other areas of the economy, reduce poverty and encourage more inclusive and sustainable growth.



Credit: Kate Bensen/OxfamAUS

Bobometo, Decusse, Timor-Leste: Marcelina Aquesen and her husband Fernando Meo have received training from Oxfam to teach them new methods of growing crops better suited to the climatic conditions they experience.

Introduction

It has been twenty years since the Popular Referendum (often referred to as the vote for Timor-Leste independence) in 1999. And it has been seventeen years since Timor-Leste regained independent governance, when in 2002 the UN Transitional Administration for East Timor (UNTAET) officially handed over governing responsibilities to the newly-elected Timor-Leste government.

Since that time, the people of Timor-Leste have faced many challenges. Not least has been the question of how to build an economy which is inclusive (bringing benefits to all Timorese, including women and people with disabilities), sustainable (providing potential income and a solid economic and natural resource base for future generations to benefit), and realistic in the global economy.

As of 2019, the Timor-Leste economy is best described as being in a state of transition from a largely subsistence economy to a market-based economy. Figures show that while there has been some growth in the private sector, 60% of the population are still subsistence farmers.

This makes for a complicated policy-making environment, as diverse sectors in such a transitional economy have very different needs. For example, the type of support and basic infrastructure that a subsistence farming family needs to grow their farming business is very different to the infrastructure and other support needed for an IT company to expand. It is a challenge for the government to meet these very different needs at the same time.

A subsistence farming family based in the rural areas has several basic and immediate needs: basic education, basic health care, better roads to and from their farms, cash in areas which function by the barter economy with limited cash supply, and access to markets/ways of selling their produce. By contrast, the infrastructure needs of a larger company

might be larger roads for trucks to travel between commercial hubs, streamlined bureaucratic procedures, access to international markets, and better telecommunications.

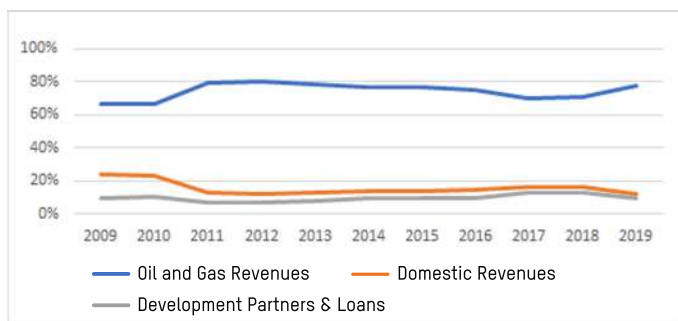
There are some important questions that need to be addressed: how will the government of Timor-Leste invest its budget to promote different sectors of the economy? And what is the role of civil society and the private sector in contributing to government decision-making on how to make the best use of its resources, and to grow and diversify the economy? This summary report aims to contribute to this discussion by presenting key concepts and data to help stakeholders engage effectively with the issues, and work together with Timorese leadership to improve the economic prospects for the future.

This summary report forms part of a larger assessment, in which various civil society, private sector and senior government stakeholders were interviewed, to understand their experiences, ideas and visions for economic development in Timor-Leste. Not all of these results are presented in this summary report. Rather, the primary objective of this report is to assist various stakeholders in understanding and engaging with the technical issues of economic development, and engage more effectively in government decision-making. While some insights from respondents are included, this is done with the purpose of contextualising and drawing links between people's everyday concerns and technical economic concepts and indicators. The issues that were most commonly raised by respondents included oil dependency, inclusive economic growth, opportunity cost, poverty alleviation, import dependency, and employment. These same themes are used to structure this report.

Dependency on Oil Income

Since regaining independence, income for the government of Timor-Leste has been highly dependent on its oil reserves in the Timor Sea, aid and loans from other countries.

Figure 1: Source of Funds for Government Budget % of Total Budget



This dependency on oil income is understandable given Timor-Leste's post-conflict legacy, when the population was attempting to rebuild following the 24 year occupation by Indonesia and its brutal ending in 1999. As income from the oil reserves began to flow, this provided much-needed income that the government could use for its various programs.

The path has not been easy: as well as grappling with the technical issues of building an economic base for the country, the government has also needed to focus on building peace and security, particularly following the 2006-07 internal conflict known as the 'Crisis.' Pragmatic political decisions needed to be made in meeting the plans of different sectors and leaders, at times creating programs and policies to 'buy the peace' avoiding further internal conflict (Valters et al, 2015; ICG 2013). Respondents also acknowledged the negative impact on the economy when the United Nations mission came to an end in 2012, with the income provided to the local economy by the UN mission and staff reducing.

International experience shows that such economic dependency is not uncommon: many emerging economies do rely heavily on aid or on natural resources for their income for some time. Often, their economies do not have a

diverse range of productive activities and as a result have a very small tax base. There is a natural tendency to rely heavily on the natural resources that they have available. The challenge for the future for these emerging economies arises from the limited supply of natural resources (and aid money). Donors who provide aid money will eventually want to reduce their assistance in favour of economic and social independence of the recipient. Natural resources are depleted over time, further reducing income flow. Figures in Timor-Leste show production and oil revenues already starting to decline for the past few years, and there is concern that any new fields will have relatively smaller capacity (see for example Scheiner 2019.)

Respondents from across civil society, the private sector and some government representatives who were interviewed for this assessment were all keenly aware of this context, and of the difficult decisions that the government of Timor-Leste must take. But representatives from the private sector and civil society in particular also noted they were 'very worried' about Timor-Leste's heavy dependency on oil and on public spending. One senior government official also acknowledged that the focus on developing the oil economy is 'risky'.

Many civil society and private sector respondents described Timor-Leste's economic development approach as 'old', failing to reflect current realities. In particular, they noted the need to adapt to the new challenges of climate change, the demographic changes of the 'youth bulge' with many young people unable to find employment, and the need to adapt to other global economic changes. There is also a need to open up more economic opportunities for traditionally marginalised sectors of society, including women, people with disabilities, the LGBTI community and others. The situation of poorer women in rural areas was a particular concern.

Despite this widespread concern around the heavy oil dependency, respondents from government, civil society and the private sector all noted the benefits that oil has brought to the Timor-Leste economy. They appreciated the role of the Petroleum Fund in helping to manage the Timor-Leste economy, and providing an important source of income for the government. However, civil society and private sector respondents noted that this source of revenue is not sustainable.

Given the many challenges faced by the Timor-Leste government, the question of oil dependency is not whether the government should have been relying on oil income as it has been. This is Timor-Leste's economic and political reality. The more important question is: how can the Timor-Leste government use the opportunity that it has now, with oil and (to a lesser extent) aid income that is still flowing, to build other sectors of the economy so that they can provide income for the future? Put a different way: what is the **opportunity cost** of not investing properly in these other sectors now, so that these sectors are more developed and able to better contribute to state income, when oil reserves are depleted? As well as the opportunity cost of not investing in other sectors, there is also a major risk for Timor-Leste if it continues to be dependent on the oil sector without diversifying into other sectors of the economy. If world prices for oil drop significantly, which is likely given the Climate Change emergency and declining interest worldwide in oil, this could put Timor-Leste in a difficult situation. Lower prices mean less revenue, and will potentially make some investments unviable.

These and other points were repeated by various respondents from civil society, the private sector and government, who noted the need to manage the remaining resources carefully. As some explained, the opportunity cost should not only be measured economically; they also noted a risk of violent conflict if the country runs out of money. There is a keen awareness that ongoing peace in Timor-Leste relies on a functioning economy.

There was a sense of urgency among civil society and private sector respondents, who

stated that Timor-Leste needs to get serious in diversifying non-oil sectors of the economy— noting in particular the need to invest more heavily in the productive sectors of tourism and agriculture. As many put it, there needs to be 'more balance' between petroleum and non-petroleum sectors, which requires greater investment in non-petroleum areas.

Many government and civil society respondents also noted the lack of clear evaluations or deep analysis being made available from policy makers, policy analysts and civil society representatives on this issue. As some put it, while the problem is known, there is little being said about Timor-Leste's vision regarding which areas of the economy need to be diversified—and even more importantly, how would that take place? Many wanted to see deeper discussion on this issue take place, so as to influence better decision-making across different sectors.

Some key government respondents argued that they do have a strong commitment to diversification, but that the path to diversifying the economy is different to what is expected from others in civil society. For example, they agreed about the importance of the agricultural sector for diversification and employment creation, but argued the role of government is primarily through infrastructure – roads, irrigation, etc. As they described it, these create the opportunities for the private sector to grow and create a market-focused agricultural sector.

For Timor-Leste to continue to grow economically, it is necessary to find more and better ways of diversifying the overall economy, and strengthening the non-oil sector. The former World Bank Chief Economist Justin Lin puts it this way:

...the performance of resource-rich countries could be further enhanced if they... invest an appropriate share of revenues from their natural resources in human, infrastructural and social capital, and create incentives for domestic or foreign firms to facilitate the development and upgrading of industries in the non-resource sector. (Lin, 2012, p. 207)

WHAT IS OPPORTUNITY COST?

A decision to spend in a certain area means a decision to not spend in another. Every decision involves a trade-off against other options. Consider two choices: Option A or Option B. We only have enough money to do one of these things. **Opportunity Cost** refers to what we forgo or miss out on if we choose Option A and as a result do NOT choose Option B.

In our ordinary lives, we think about opportunity cost all the time. For example, if someone must decide whether or not to do vocational training, they must weigh up: is the cost of the training worth it? Will the training help them to get a better job, and earn more money, in the future? They know it's hard to find the money to pay for the training. The training might mean time spent away from their family. Money spent on the training won't be available for other things – perhaps buying a motorbike. But they also ask themselves: what will they lose in the future because they chose to not do the training (and not get that better job, with the better salary?) What potential salary might they lose in the future because they chose to not invest in training now? The potential future salary that they lose is the cost of a lost opportunity—or opportunity cost.

In the context of Timor-Leste's economic development, we can apply this same principle to government decisions to invest in different sectors of the economy. We know that building the agricultural sector is difficult. To do it well, the government must invest a lot more money than is currently being invested into basic services such as health, education and basic infrastructure, and better technology to increase productivity. But it is still a good idea to do this, because it will help farmers become healthier and be better educated, and will provide basic resources such as irrigation and small roads which will help in their work. This will give farmers the resources they need to increase their production and income.

Presuming these government investments are well-implemented (just like the student who must work hard and pass the course in order to make his investment worth it), this will lead to better productivity among farmers, and a stronger agricultural sector. On the other hand, if the government does not invest in these basic needs, choosing instead to build a large road somewhere else, the farmer will continue to struggle, be less productive, may even reduce what he or she grows – or give up altogether.

In practical terms, what this means is that Timor-Leste needs to move away from reliance on natural resources to reliance on broad-based productive activities. Such productive activities would include the government of Timor-Leste's stated target sectors of tourism, agriculture and manufacturing. For these sectors to become strong enough that the government can rely on them as a source of income in the future, they first need investment to help them grow.

The advice of Justin Lim and many others is to make good use of the wealth that is built up from the use of the natural resources to provide the base for future diversification.

Macro-Economic Policy Making

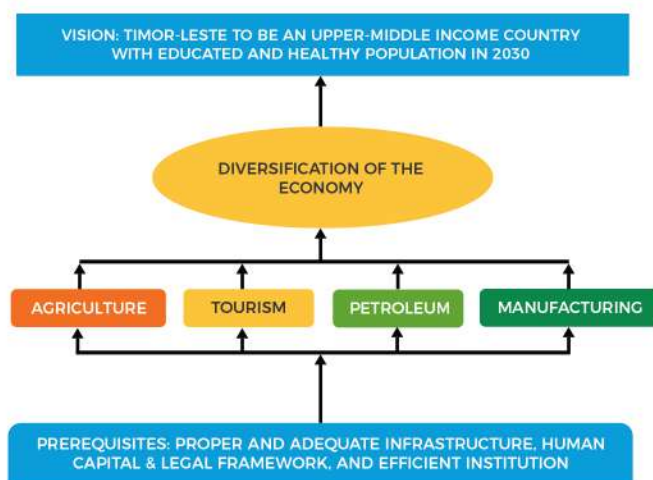
The government has a critical role to play in developing the Timor-Leste economy. Generally speaking, key roles for the government in any country include:

- developing the physical infrastructure required for a modern economy
- building the legal frameworks and institutions that oversee society and the workings of the government and the economy, and
- establishing strong service delivery processes.

When a government performs these functions well, they are considered to have created a good 'enabling environment' for economic development. What this means is that they are providing the necessary conditions for other parts of the economy, and in particular the private sector, to grow.

The Program of the Eighth Constitutional Government is focussed on developing four main sectors: agriculture, tourism, petroleum and manufacturing, as represented in the below diagram:

Figure 2: Sectoral Priorities of the Eighth Constitutional Government



Source: Presentation by Helder Lopes, Principal Advisor to the Minister of Finance, 14/6/19 to the Asia Foundation Policy Leaders Group Workshop, Timor Plaza

Figure 2 identifies what the government considers to be the key non-oil sectors of focus – agriculture, tourism, and manufacturing. It also names what the government considers to be the main “prerequisites” to progress in these sectors: adequate infrastructure (e.g. transport, electricity), human capital (mainly education, health), legal frameworks (laws and regulations governing land, business and markets), efficient institutions (e.g. business registration, dispute resolution).

All of these pre-requisites require detailed planning from within different Ministries, laying out the specific activities they must implement in order to properly meet the government’s stated objectives. However, macro decisions on the annual budget are the first vital step: indicating to each Minister the extent of the government’s commitment to implementing activities in each individual Ministry.

While the stated government program notes a commitment to four areas of focus: agriculture, tourism, petroleum and manufacturing, a number of respondents described government policy-making and investment decisions as focussing primarily on diversifying *within* the petroleum sector. For example, some pointed to government statements that the agriculture and tourism sectors cannot sustain the Timorese economy because they are still very small, and are therefore unable to provide a good return on investment which will allow ongoing income for the government to function.

Because of this, they described the government tendency to focus mainly on developing different parts of the petroleum sector because they can see a large potential return on investment for Timor-Leste. This is also reflected in the government budgets over the past ten years, with disturbingly low budget allocations for agriculture, tourism and manufacturing—indicating lower levels of commitment to these sectors.

ECONOMIC POLICY MAKING

The broad agenda for each government's priorities is set after each election time, for the next cycle of government. In principle, this agenda should reflect the policy platform that was presented to the people during the election campaign process. In Timor-Leste (and everywhere else in the world), the government may need to adjust its agenda as political compromises are made.

To implement their agenda, the government will then do the following:

- introduce a range of legislative initiatives, to establish a legal framework for implementing their agenda.
- introduce and debate the annual budget, where “macro” (large-scale, country-wide) decisions are made about the “size of the budget envelope” (maximum budgeted expenditure for the year), and then showing how that budget is divided among the various ministries and other programs.

In principle, budget allocations should be set to reflect the strategy and priorities that the Government has stated.

We can analyse a government and parliament's commitment to developing different areas of the economy, by looking at the “macro” decisions on how the budget is allocated each year.

Considering budget allocations over the past ten years, the Government of Timor-Leste has allocated the following amounts into different sectors of the economy:

Ministry	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Health	55.1	53.1	51.4	61.3	68.0	74.6	70.8	44.1	45.1	43.1	45.4
Education	104.8	100.5	95.1	120.2	100.8	118.4	104.2	104.6	88.8	73.5	82.0
Infrastructure Fund + Oecusse	328.5	322.8	1,011.4	145.8	661.9	472.0	463.3	635.0	511.7	417.3	442.4
Agriculture	56.8	24.4	17.5	20.5	27.6	28.0	26.8	23.2	16.7	7.1	14.7
Tourism, Commerce & Industry	102.2	57.1	36.9	24.0	25.5	30.9	33.9	19.0	14.6	5.6	7.8
Total Expenditure	1,511.0	1,278.8	2,034.1	2,362.4	2,026.9	1,862.9	1,811.2	1,772.9	1,591.6	1,473.7	1,989.6

Units: \$ millions, adjusted for inflation, 2019 prices

Sources: Budget Books 1 & 4

When these figures are adjusted for inflation, we can see that expenditure in key areas such as health and education—essential for supporting people to better engage in economic activity—has gone down. The decline between 2014 and 2019 budgets was 39% for Health, and

31% for Education. Budgetary investment in important sectors such as agriculture and tourism, commerce and industry has also declined – by 47% for Agriculture and 75% for Tourism, Commerce and Industry.

Poverty

Poverty can be measured in different ways. In Timor-Leste, there are two main ways of measuring poverty: **consumption poverty** or **multi-dimensional poverty**. Consumption poverty is assessed by measuring how much money a household earns per day. If they earn less than \$1.50 per person per day, they are considered to be poor. Anyone earning over \$1.50 per day is considered to not be poor. Because many farming households are also subsistence farmers, this is taken into account by calculating the value of the food farmers produce and consume themselves. The value of that food is counted as part of their income. In 2014, consumption poverty in Timor-Leste was 28% in urban areas and a very high 47% in rural areas.

The multidimensional poverty index, by contrast, is based on the view that poverty is represented

not just by the money you earn and the food you eat, but also the living conditions, the health, and the educational achievement of people. The Demographic and Health Survey uses this method to calculate poverty in Timor-Leste. Multidimensional poverty ranges from only 25% in Dili Municipality to over 80% in several of the rural municipalities (Cornwell, Datt & Inder, 2015).

While government respondents noted that poverty in Timor-Leste has been declining overall, World Bank analysis also shows that the gap in poverty between urban and rural areas is high, and has been increasing over the past ten years (World Bank Group, 2016).

The high numbers of rural poor means that for economic growth to have a real impact on poverty reduction, this needs to occur in the rural areas rather than being centred in Dili.

Growth and Inclusive Growth

As noted above, while poverty has been reducing, this has had limited impact in the rural areas. In addition, while the economy has been growing, there is little evidence of growth in the productive capacity of the domestic economy. The agriculture sector remains the source of livelihood for approximately 70% of the population, yet there is virtually no growth in total incomes in that sector. Nor is there much sign of rapid transition out of agriculture, with only a modest decline in the number of households who rely on agriculture as their main income source (from 76% in 2010 to 69% in 2015). While the drift towards urbanisation is steady, it is not rapid by international standards. But with the growing youth population moving into working-age, the level and nature of economic growth in the non agriculture sectors cannot generate sufficient jobs for the growing numbers of working-age population. Growing unemployment and underemployment among the youth and young adults emerges as a noticeable symptom of this economic reality.

Economic growth must be distinguished from 'inclusive economic growth'. While a country's economy may grow, the impact on poverty reduction depends on where in the economy the growth is taking place. If the growth is taking place in sectors of the economy where people are very poor, for example increasing the income of many small farmers, then that growth will be considered 'inclusive growth' because it is reducing the poverty experienced by these people.

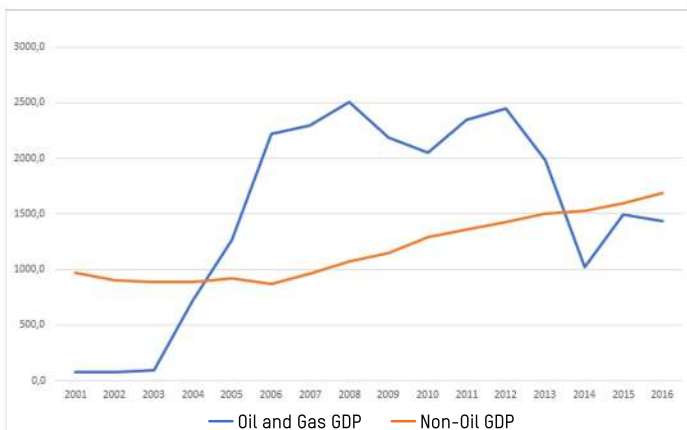
On the other hand, if growth takes place mainly via a high-tech factory that is built in Timor-Leste, and provides only small amount of employment, mainly for highly skilled workers, this is likely to benefit only a very small portion of the citizens, and almost certainly the more educated and wealthy because the type of work requires people with higher levels of education. Such economic development would not be considered inclusive growth.

Even among poor rural communities, there are some people who are wealthier than other people. Inclusive growth must therefore also provide benefits to sectors of the community who are traditionally marginalised, such as women, people with disabilities, the LGBTI community, and others. Issues of access to livelihoods, and people's capacity to work without facing discrimination, violence, or problems with accessibility are therefore also important for making growth inclusive.

While the Timor-Leste economy has been growing, the growth that has taken place has mainly benefited the small but growing middle class who live in Dili—mostly through their connection to petroleum-funded spending by government (public spending). As an example, many respondents noted the economic stagnation recently experienced from 2018 to 2019, because of problems with the government budget—indicating the high dependency on government spending. Some respondents noted the 'crowding out' effect of government spending as it shapes the private sector, so that the majority of international and local businesses at present are simply 'contractors' who are trying to get government contracts, rather than 'real investors' who are looking to invest their money in different sectors of the economy.

GDP figures also help us to see where growth is taking place. The graph below shows the two main components of total GDP: the oil and gas sector, and the Non-Oil GDP. This shows how rapidly Oil and Gas GDP rose since 2003, reaching its peak in 2012. There has been a significant decline in oil income since then, as the production passed its peak and began to decline.

Figure 3: Real GDP for Timor-Leste by Sector 2001–2015



Real Non-Oil GDP has grown steadily over the ten years from 2006, indicating that non-oil production in Timor-Leste has grown. However, poverty levels continue to be high in the rural areas, indicating that growth has concentrated on the Dili-based, and still relatively small, middle-class. A good example of this is motorcycle ownership, showing economic progress in households that can invest in private transport, indicating that they have already filled their basic needs. In 2007, less than 8% of households owned a motorbike. In 2015, almost 24% of households owned a motorbike. In 2015, 47% of households in Dili owned a motorbike, but only 10% of households in Ermera owned a motorbike.

When we break down Non-Oil GDP into the main sectors of the economy, we can also see that this growth has not taken place in productive sectors such as agriculture or manufacturing. Rather, most of the growth in GDP has been driven by government spending of funds generated from the Petroleum Fund, for example towards the building of roads. While this has injected money into the economy through (mainly) large-scale infrastructure and providing government jobs, this type of employment creation is not sustainable as it is dependent on oil income. It is also not inclusive, because it benefits only a small portion of society, and mostly the middle class urban residents. When the oil finishes, if other sectors of the economy have not been developed so they can continue to provide income to the country, the government will no longer be able to invest money in this way.

In assessing the impact of GDP growth on poverty reduction, it is therefore useful to ask: where is the GDP growth mainly taking place? Is it mainly in Dili, or is it also in the rural areas? Another important question to ask is: in what sectors is GDP growth mainly taking place? Is it in sectors where poor people are mainly employed (e.g. agriculture), or is it in other sectors? Does it benefit traditionally marginalised sectors of the community, or is more benefiting those who are relatively better-off? Current statistics indicate that the economic benefits of the current development strategy are more at the upper and middle end of people that earn money. While 70% of the population is dependent on agriculture, there has been no real growth in this sector.

MEASURING ECONOMIC GROWTH

The most commonly reported measure of the level of economic activity in a country is GDP. GDP stands for Gross Domestic Product, and measures the total value of all production in an economy. Economic progress, or economic growth, is described in terms of the rate of growth in GDP.

As a macro-level (higher level) indicator, GDP measures are not exact. However, knowing what GDP is, and being able to track how different sectors are growing, is very important to understanding what is happening in the economy. It tells us whether and to what extent the economy is increasing or decreasing in the value of goods and services that are produced over a specified period of time (often annually).

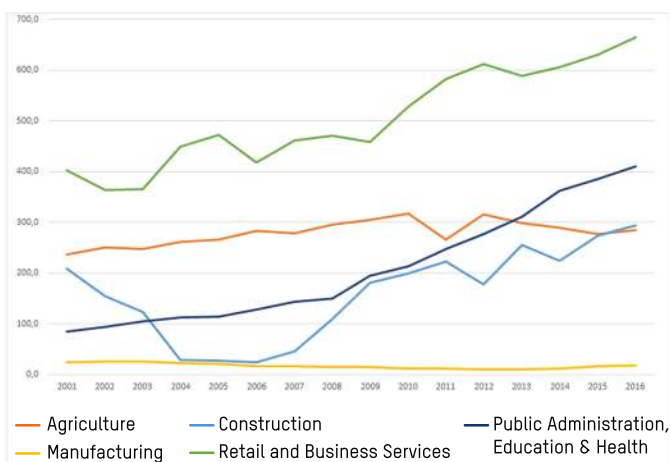
GDP may grow from one year to the next because prices have risen due to inflation (with 'inflation' referring to the rise in prices for goods and services over a specified period of time – generally per year.)

GDP growth which is only because of inflation is not genuine "growth" because it does not indicate an actual increase in production. It doesn't make people any better off. This is why, most of the time, the government and others in Timor-Leste use what is referred to as **Real GDP growth** to show economic growth. Real GDP growth is growth which is adjusted for the effects of inflation, showing us only increases in the size or volume of production.

There are three other important points to be aware of using a GDP measure in Timor-Leste:

- GDP does include estimated value of subsistence farmers' production of food that they consume themselves. So even though that food is not bought or sold, it is still counted as "production".
- Usually the Government reports GDP categories. The most useful of these is to look at GDP by Industry area – this allows us to see whether growth is happening overall, but also in which industries – is it in agriculture, or government services, or tourism and hospitality, or in another sector?
- In Timor-Leste, two different GDP levels are reported: **Total GDP**, and **Non-Oil GDP**. Total GDP includes Non-Oil GDP plus the domestic value of Oil and Gas produced in that year.

Figure 4: Real Non-Oil GDP for Timor-Leste by Sector, 2001-2016



Units: \$millions

Data Source: Timor-Leste National Accounts 2016

As shown in Figure 4, there has been no real change in manufacturing over the whole period. Agriculture grew very slowly up to 2010, but then no growth at all since 2010. By contrast, the sectors that have grown rapidly are those mainly associated with government spending.

Public administration has gone up from \$100m to over \$400m in real terms (adjusted for inflation). The rapid growth in construction is almost all driven by government contracts. Much of the growth in retail and business services is also associated with government activities.

Respondents also noted the impact of current policies as creating disincentives for people to participate in other sectors—in particular, for farmers. One respondent noted how many people have abandoned their land – it is estimated that only 30,000 out of 70,000 hectares of viable farming land are being actively used for farming or other activities. Others noted the impact of government subsidies, where people can rely on buying imported goods, so do not need to do the heavy work of farming in order to live. Others

noted with concern the ‘brain drain’ from the rural areas, as people move to Dili and others move abroad, because they do not see good opportunities for themselves or their children if they stay on the family farm. This natural response to the current economic climate further reinforces tendencies to centralise spending, as the trend of urbanisation puts greater pressure on infrastructure and service delivery in the urban areas.

Employment Trends

As well as looking at GDP, another way to analyse who is benefiting from economic growth in a country is through analysing which sectors people (and particularly poor and marginalised people) are primarily employed, and comparing this to which sectors are growing economically.

The Table below shows the distribution of primary occupations of working adults, as reported in the 2015 Census.

- The second most common occupational category is the services and sales sector, with 17% of occupations.
- Note the very small percentage in “crafts, trades and machinery” occupations, at 3.6%. Compared to over 27% in Indonesia, this highlights the very low level of economic activity in the manufacturing and secondary processing areas in Timor-Leste.

What this tells us is that the Timor-Leste economy, as described by the type of work people engage in, continues to be dominated by agricultural work, with a large services sector, and a very small manufacturing and processing sector.

Employment by Sector: Census 2015

Government & State Owned Enterprises	16.9%
Privately Owned Business	4.8%
Self Employed Farmer	64.2%
Self Employed non-Farmer	10.5%
NGOs and Non-Profits	1.3%
Embassies, International Organisations	0.3%
Oil and Gas	0.1%
Other	0.1%

Main Occupational Category		
	Timor-Leste	Indonesia
Professional	1,4%	6,5%
Manager	3,2%	1,0%
Teacher	4,3%	
Associate Professional/Clerk	5,0%	5,2%
Services, Sales	17,0%	24,1%
Armed Forces, Police	1,7%	
Xefe	0,4%	
Farmer	59,9%	35,3%
Crafts, Trades, Machinery	3,6%	27,3%
Labourer	0,8%	
Driver	2,0%	
Not Classified	0,6%	0,6%

Here are the main observations from this table:

- Around 60% of working adults report themselves as farmers.

Analysis of industry of occupation using the 2015 Census tells a similar story:

- While the oil and gas sectors comprise the vast majority of the economy in GDP terms (up to 80% in some years), very few jobs are generated in this sector. In fact, only 0.1% of employed persons reported working in the Oil and Gas industry.
- Aside from self-employment in agriculture the largest industry is government employment, with 17% of all workers. This means that a significant portion of the population are directly dependent on government salaries—and government income continues to be very dependent on oil and gas.
- More than 60% of people are employed in the agricultural sector. The types of methods that the majority of farmers use are traditional methods suited to subsistence farming, cultivating only small landholdings (66% of farming households have less than one hectare of cultivated land, 98% less than five hectares.)
- A very small percent of occupations are in the business and entrepreneurship industry category, indicating the existence of a very small private sector outside agriculture.

HOW IS EMPLOYMENT 'CREATED'?

Government policies and programs are critical to framing how different sectors will grow, by choosing how to spend the annual budget and what programs to carry out. However, policy-makers do not themselves 'create' most jobs. Most economic activity is carried out by private businesses and individuals, who rely on the government to provide the right enabling environment for them to do their work. In this way, governments have an indirect but no less important role in employment creation by providing good infrastructure, legal frameworks and public service delivery.

However in Timor-Leste the approach to employment creation has been a little different. Government budgets over the past ten years show a focus not only on oil, but also on large-scale infrastructure (roads, bridges, irrigation, ports, airports and others). Various infrastructure programs have been created to support various forms of direct employment for people (for example, the rural roads development program).

This type of quick employment creation is more direct. The government can control the activity: it is easier to define the task, to contract out the work, and to spend a lot of money quickly, some of which becomes salaries for construction workers. This is not to say that investing in large

infrastructure is not good. Providing electricity across the country has brought many benefits. But is a focus on these projects which only run for a few years sustainable?

Another approach to employment creation might be more of a "bottom up" strategy: for example building productivity and creating markets for farmers, and reducing post-harvest waste. This requires more of a diversified strategy. Improving education and health provision makes the entire farming family healthier and more productive. Specific infrastructure such as small roads and bridges linking farms to markets helps the family to sell their produce—either by selling it themselves, or facilitating middlemen to do it. More and better training and support in business and farming techniques can help the farmer make better decisions and become more resilient, responding to the Climate Change emergency. Improved water supply and other basic services can boost productivity.

A "bottom up" approach to employment creation requires more of a diversified approach, and is more long-term. But international experience has also shown it to be much more sustainable, as the farmer continues to invest and grow his or her business for many years to come.

Census and GDP figures tell us that while the majority of people are employed in subsistence agriculture, economic growth in this sector has been very limited. This means that farmers are generally not benefiting from the growth that is happening in the country. Many respondents noted this with concern: as they explained, the majority of Timorese continue to work as subsistence farmers. This is even more concerning when we consider the situation of women, people with disabilities, or other marginalised people in these rural communities. For example, women farmers produce 15% less than men farmers, because of the various social and other obstacles that limit their productivity (UN Women & World Bank, 2018). Similarly, respondents noted how issues of accessibility limits the productive potential for people with disabilities.

Imports and Exports

Another window into the current reality of the Timor-Leste economy is the relative reliance on imports. A large proportion of national expenditure is on imports (around 30% of GDP), while exports continue to be very small. This situation of high imports and low exports, referred to as 'imbalanced trade', clearly indicate missed opportunities for Timorese businesses and the Timorese economy. When Timorese consumers spend their money, this money ultimately leaves the country, going to benefit the businesses and economies of other countries. There are only very limited benefits from this trade to people in Timor-Leste.

Imbalanced trade can lead to major problems. Just like a household, a country should not spend significantly more than it earns. If imports (goods from foreign businesses) are significantly higher than exports (goods from Timorese businesses, which are sold abroad), this can lead to high inflation. This is because in the world market, a country needs to earn its foreign currency via revenue from exports of goods and services, and that currency can then be spent

These statistics have clear implications if the government is to encourage inclusive economic growth. One important route to reducing poverty is to encourage employment in sectors where people are traditionally poorer; another is to improve the income that poor people can earn from their work. Improved employment amongst farmers (including for young people, women, people with disabilities, and others), and improving the income that they can earn from their work, requires improving agricultural productivity. This requires greater governmental investment in education and training to help better decision-making, more and better agricultural extension work, improved basic infrastructure such as water for irrigation and roads to take produce to the markets, and various other investments. This would also open up greater potential for other related industries, creating more employment for others along that same value chain.

to pay for goods that are being brought into the country (imports). Ideally, exports and imports should be roughly the same magnitude.

The situation is not that simple for Timor-Leste, partly because of the use of the US dollar, and partly because the oil sector has historically provided such a large source of foreign revenue, through taxes and royalties paid by international petroleum companies. However, a major imbalance between exports and imports still poses some major long term challenges for Timor-Leste's economic development.

Although the figures from 2018 show a large trade imbalance, the Timor-Leste economy is not yet suffering high levels of inflation. This is because at this point, the foreign income from oil revenues is more than enough to cover the cost of this heavy reliance on imports. However, as oil revenue declines, this trade imbalance will not be sustainable. In effect, Timor-Leste will face two challenges: less overall revenue for the government to spend, coupled with rising prices that the population will have to deal with.

Below is a summary of the export-import equation from 2018:

IMPORTS		565.2
Main Items		
Fuel	141.7	
Vehicles	56.3	
Cereals (Rice, etc)	38.5	
Electrical Equipment & Machinery	27.6	
Other	301.1	
EXPORTS		46.3
Main Items		
Coffee	19.2	
Candlenut	0.2	
Re-Exports	23.2	
TRADE BALANCE		-518.9

(\$ million) Source: Timor-Leste Trade Statistics 2018

In 2018, Timor-Leste lost \$518.9m to the import market, earning \$46.3m from exports, but spending \$565.2m on imports. Coffee was the only other substantial export earner, but at only \$19.2m per annum it is tiny compared to oil and Petroleum Fund revenues of \$672.8m in 2018 (RDTL Budget Book 1, 2019). The only other source of foreign funds is income from remittances (with Timorese working overseas and sending money home), which in recent years has grown to exceed coffee, bringing in an estimated \$88m per annum (World Bank Data, 2019).

A number of civil society and government stakeholders expressed their concern about Timor-Leste's high dependency on imports. As they explained, it is important for the government to reduce imports by encouraging 'import substitution' whereby local products can be produced and sold in Timor-Leste, reducing the reliance on imported products. Some imports such as vehicles and machinery would be difficult to manufacture in Timor-Leste, requiring high levels of investment. However, other items such as rice and other related cereals are already being grown locally. In 2018 Timor-Leste imported \$38.5m of rice and other related cereals alone. Possible products for import substitution would need to be carefully selected and strategically supported, so that producers can effectively compete against foreign businesses, keeping the money in the country.

As a senior government official explained, added-value products need to be identified that would earn more money for the country. This could be achieved via greater production for exports, or production to substitute imports, or both. Many stakeholders noted the possibility for Timor-Leste to position itself by focussing on niche, organic produce, which could be sold locally and internationally. There are some examples already, but many of these are being supported by NGOs and it is unclear if they will be competitive on the global market. However, some Timorese businesses have been successful in breaking into the export market. For example, local business ACELDA has been exporting local organic products to Hawaii for ten years, and more recently over the past two years exporting to Macau. Such success stories demonstrate the potential of organic produce serving international markets.

Approaches to Development: Top Down or Bottom Up?

Macro-economic indicators can tell us a lot about how an economy is progressing, which sectors are growing, and which sectors are stagnating. By analysing where the growth is taking place against employment trends, we can also see who in the population is mainly

benefiting from economic growth, who is missing out, and (to some extent) the impact that growth is having on reducing poverty across different sectors in the country.

In the same way, we can analyse government priorities for economic growth by examining their macrobudget allocations across different sectors. Budget allocations across different Ministries are important because they show how much money is being allocated overall. But what they don't show is how that money is spent by each Ministry (which programs they will implement), or how the Ministry programs are linked together as part of a strategy to promote different sectors of the economy.

In developing a strategy for economic development, a major question for government policy-making is whether it should take a "top down" or "bottom up" approach to the economy. While government decision-making is extremely important to shaping the economy, it is still the private sector that undertakes most economic activity. The role of the government is to develop a good enabling environment for the private sector to flourish: developing necessary physical infrastructure, building legal frameworks and institutions of government, and establishing strong service delivery processes. Government policy-making in any country tends to use a mixture of top down and bottom up approaches, but with a bias towards one or the other.

In Timor-Leste, the bias towards economic development has been to take a largely top down approach. This is not surprising, given the high dependency on oil revenues which the government is able to control directly. The top down approach is built on the assumption that if you create the necessary (large-scale) infrastructure for a particular industry, then there is a great deal of what is referred to as 'latent economic activity' at the community level which is waiting to burst into existence.

This assumes, for example, that community members are already sufficiently educated and primed to pursue their private enterprises, that they are ready and able to make the transition from subsistence to market-based economy, and that they have the necessary entrepreneurial resources and mindset to be able to analyse and identify a gap in the market, and take the risk to develop a business. It also presumes that they are

ready and able to compete with foreign businesses, many of whom have had access to better health, education and other basic services. The top down assumption is that the only thing holding back the emergence of a wide range of new businesses, or the creation of new jobs, or the diversification of the economy, is the lack of large infrastructure such as a high quality transportation network or reliable electricity network.

Built into the top down approach is the linked presumption that if sectors are to be considered viable, they should show relatively quick return on investment from government budget allocations. Some civil society and private sector respondents noted government statements that sectors such as tourism are very small because there is insufficient infrastructure to draw in foreign investment and encourage tourists to visit. As a result, the government concludes that this sector won't show adequate return on investment, making it a better proposition to invest in the petroleum sector and/or large infrastructure such as roads and airports. This was openly acknowledged by one senior government official, who explained that they are taking a 'front loading policy' approach to creating basic infrastructure for the identified sectors, which are expected to bring results in the next few years. This is classic top down thinking: taking the view that efforts to build sectors such as tourism and agriculture must address these large-scale needs first, before looking at what other diverse resources and support people might need to become more productive.

The success of such a top down approach to economic development depends on whether the large-scale investments are essential first steps to development, and whether economic activity will 'naturally' emerge once these investments in transportation, electricity, and other such infrastructure have been completed. For example, it could be true to say: "why support establishing a tourism destination if the road to that place is poor and the airport is substandard? No tourist will want to come. We must fix the road first." Or it could be true that "Once we have good

rural and main roads, farmers will finally have access to markets in Dili, and productivity will start to increase quickly.”

It is worth highlighting that in one interview with a key government leader, there was a very real hope that the economy would diversify through the emergence of a strong private sector. The government’s role would be limited to creating the infrastructure and the institutions that support the private sector. The key question here is whether this private sector will emerge without further intervention / stimulus / support. Another government official suggested that stronger intervention would be needed, possibly through government-owned businesses.

The alternative view, in contrast to the top down approach as described above, is that large-scale investments are not enough to create sustained, broad-based inclusive growth in different sectors. Rather, what is needed is ‘getting our hands dirty’ with the grassroots creation of firms and businesses, improving agricultural productivity, and providing the right enabling environment for entrepreneurship to flourish. Such a bottom up approach would involve far greater investment in education and training, in agricultural research and extension work, in business training and supporting entrepreneurs, in developing sector plans and investing heavily in tourism, agriculture and manufacturing. As opposed to the top down approach, the bottom up approach is built on the assumption that there may not be much of this latent economic activity that is ready to burst forth. What actually needs to happen is some proactive work to nurture that kind of economic activity.

Overwhelmingly, respondents interviewed for this assessment subscribed to this alternative, bottom up view. As many explained, they could not imagine an economic future that is sustainable if there continued to be insufficient attention paid to basic health and education for the people. Many respondents also pointed out that there is great potential in non-petroleum areas of the economy, but that the problem has been an ongoing lack of investment, particularly from the government. A number of respondents also observed that compared to the investment

needs of petroleum, investment in non-petroleum sectors such as agriculture is significantly cheaper and (they believed) could obtain relatively quick results. All of these points bring us back to the question of opportunity cost. What is the cost to the economy overall, and to different sectors of the economy, if there continues to be such under-investment in areas such as agriculture? This needs to be measured in terms of people’s lives. Given the growing poverty gap between urban and rural populations, it is unclear whether the rural poor will have the resilience to withstand additional shocks or pressures such as increasing inflation. In addition, and as noted previously, opportunity cost should not only be considered in monetary terms: a decline in the economy may also lead to instability and/or conflict.

As well as actively supporting entrepreneurship, there are obstacles that the government could address to help promote business activity. Private sector respondents pointed out that there is a great need for reduction of government bureaucracy, or ‘red tape’. Some also noted that sometimes there was inappropriate political interference in activities of the private sector. A number of private sector and civil society respondents noted that there was insufficient harmonisation between different Ministries, limited information for private businesses, and that bureaucratic procedures are too rigid. The finance sector also needs to be improved. As a senior government official explained, one of the challenges has been to attract foreign direct investment, and this needs in-country access to finance.

These factors combine to make Timor-Leste less business-friendly for local businesses, and make it less attractive to foreign investors who are seeking to make a ‘real’ investment in the private sector (as opposed to foreign contractors who are simply trying to win government contracts).

Sectors identified by respondents for their potential for economic diversification, if given greater policy and budgetary importance included: tourism, agriculture (including fisheries and horticulture), and basic food and other manufacturing. Particularly for agriculture,

a number of respondents noted the potential for Timor-Leste products to occupy niche markets as organic produce, both locally and internationally. This is a strategy which has been successfully employed by local company ACELDA, which for the past ten years has sold organic produce through partnering with a major company in Hawaii. For the past two years, they have taken a similar strategy with a Chinese company in Macau, also focussing on the export of organic produce. These and other such success stories are worth learning from, to encourage growth in the agricultural and manufacturing sector, in a manner that appropriately reflects the Timor-Leste context.

Of course, infrastructure and other elements emphasised by the top down approach are still important. There is a clear need for some large-scale infrastructure projects – roads, ports, and electricity networks, along with direct business support services such as financial institutions that give greater access to funds.

However, the key point of the bottom up approach is that these basic foundations, by themselves, will not be enough. It is also worth asking whether there is a genuine commitment from government to their own infrastructure-led strategy – for example, an investment of only \$2.5m in

current agriculture-related infrastructure in 2019 is going to make virtually no impact on the sector.

As Inder et. al. (2018) describe, taking a bottom up approach to developing individual (and interlinked) sectors requires a more detailed strategy, where selected key industries are actively nurtured, based on their strengths and weaknesses.

This requires getting a lot more specific than the top down approach tends to allow. Each sector requires different types of activities and support from the government in order to grow. For example, while the oil sector and agriculture both need roads, the roads that they each need are very different, with the oil sector needing major roads between economic hubs, and farmers needing smaller roads connecting farms to marketplaces. Similarly, while tourism and manufacturing may both need better links to international markets to help them grow, the types of government support and policies they need to reach their target markets are very different. Without taking a bottom up approach which facilitates this finer detailed planning, effective policy making to respond to such nuances are easily lost in discussions of which piece of major infrastructure should be built next.

Conclusion: Forging a Path Ahead

The government of Timor-Leste faces many difficult decisions about how best to support economic development in the country, and what their budget priorities should be. Civil society has a role to play in this work, by analysing government policies, and encouraging government decision-makers to develop economic development strategies that are inclusive of all sectors of society, including women and people with disabilities, and that are in the long-term interests of the country.

Civil society and government respondents alike explained that economic development cannot go ahead if there is no peace or stability in the country. For this reason, they noted that security and political stability are key to successfully developing and diversifying the economy. While there were many concerns expressed with the

emphasis on large-scale infrastructure and developing the oil economy to the detriment of other sectors of the economy, many also acknowledged the difficult decisions faced by the Timor-Leste leadership. Civil society, private sector and government respondents explained that they believe the leadership wants to see development go ahead in the country. The question is: what is the correct path to be taken in achieving this?

Government Priorities & Budget Allocations

As noted previously, the government's stated priority areas for development are: manufacturing, agriculture, oil and gas, and tourism. However, it is often difficult to tell a government's priorities by focussing only on what they say.

Government priorities are best understood and identified by observing their policy decisions and budget allocations, and inferring their underlying beliefs and approach based on these.

Current and recent budgets show the government's two main spending priorities: building large-scale infrastructure, and growing the oil-based economy, as follows:

- Significant investments in long term oil and gas possibilities – mainly centring around Suai Supply Base, Greater Sunrise, and the Beaco LNG facility (Tasi Mane).
- Sizeable allocations to large-scale infrastructure projects, including airports, highways, ports, irrigation, ZEESM infrastructure, and other similar investments.

Key points from this breakdown of the Infrastructure Fund:

- Government's infrastructure priorities emphasise access, with roads and bridges representing well over 50% of the budget.
- Tasi Mane and Oecusse investments use a sizeable proportion of the budget. More is budgeted for Tasi Mane in 2019 than for the Health, Agriculture, Tourism, Commerce and Industry Ministries added together. It is also important to note that the full picture of government commitments to Tasi Mane and Greater Sunrise is more complex than what is represented in the table above. There are various other approaches to financing via Timor Gap, use of Petroleum Fund, Loans, and other modalities that appear outside the budget.
- Infrastructure investment for the other pillars of economic development is extremely, disturbingly low: only 0.6% of infrastructure is for agriculture, and 0.1% for tourism.

By contrast with large-scale infrastructure spending and investments to grow the oil-based economy, current and recent budgets show either very small growth or even declining investment in Agriculture, Tourism, Commerce and Environment. In real terms (ie. adjusted to account for the effects of inflation), allocations for all of these

2019 Infrastructure & ZEESM Funds

Does not include shares in Greater Sunrise

Item	Amount (\$ million)
Roads & Bridges	236.1
ZEESM	76.0
Tasi Mane	60.6
Electricity Network	15.3
Airports	12.6
Urban and Rural Planning	9.5
Government Buildings and Infrastructure	7.2
Water & Sanitation	5.1
Sports Stadiums	2.8
Irrigation for Agriculture	2.5
Health Facilities	1.1
Education Facilities	0.9
Tourism facilities	0.3
Other	13.5
Total	443.5

Source Budget Book 3, 2019

Ministries have declined. For example, the budget for Health rose to \$74.6m in 2014, but in 2019 was only \$45.4m in real terms.

The budget for Education was \$104.8m in 2009, and rose to a high of \$120.2m in 2012 – but in 2019 was only \$82m. The difference is even more stark for Tourism, Commerce and Industry, with \$102.2m allocated in 2009, compared to only \$7.8m in 2019.

This decline is even greater in real per capita terms – if we consider how much is being spent per person, per year, with these amounts adjusted for inflation. The budget for Education, for example, shows real spending per student declining by 20% between 2010 and 2015.

WHAT DO BUDGET ALLOCATIONS TELL US ABOUT UNDERLYING BELIEFS OF GOVERNMENT?		
The Issues	The Implied Government View	The Alternative View
How urgent is it to diversify from dependence on oil and gas?	<i>There is no urgency to diversify, there is plenty of oil and gas revenue to be earned for several decades to come, and we should invest funds to get the best out of these oil and gas reserves.</i>	<i>It is urgent, as oil revenues are already declining, future options may not be profitable. There is significant opportunity cost in not diversifying/investing appropriately in other identified sectors.</i>
Should diversification happen mainly via top down large-scale infrastructure investments, or via bottom up investments in development projects?	<i>Efforts towards diversification need to follow primarily a top down philosophy, focusing on large-scale infrastructure projects. Economic activity will emerge once this infrastructure is in place.</i>	<i>Selective investment in infrastructure is needed: priority needs to go to bottom up support of agricultural productivity and access to markets, and emerging businesses in manufacturing and tourism.</i>

Finding the appropriate balance with these questions and the diversity of views is not easy. There is rarely clear-cut evidence that one particular view or policy approach is “wrong” and another “right.” As explained by senior government respondents, economic development decisions need to be taken in context, and there are always risks that need to be considered and managed. It is the role of the government to balance these risks, and make these difficult decisions. However, as noted by other commentators, the stakes are high, with significant risk of loss or even bankruptcy if the current approach of front-loading for development of the oil sector does not bring the results that are hoped for.

It is also important to note that even with a sensible development strategy, how the strategy is implemented is crucial to whether it succeeds or not. The projects that are chosen for investment, and how these projects are implemented, should be carefully considered so they are strategic, bringing the maximum benefit to the community while being cost-effective and with minimal risk. For example, the cost of

building a main road can vary from \$2m per km to more than \$10m per km, depending on the width, degree of separation, and other variables. It is up to government decision-makers to decide whether the option that costs five times more is really necessary to bring the hoped-for results. Opportunity cost is also important here: as well as considering whether potential return on investment justifies the extra cost, it is important to ask what other important infrastructure or investment is neglected because of over-investment in this road?

An Optimistic View of the Current Development Path

If indeed there is plenty of oil and gas to be mined for the future, then it has the potential to continue funding the Timor-Leste budget for decades to come, in the same way that Timor-Leste has relied heavily on petroleum fund revenues for the past decade or more. This in turn opens up the possibility of investments that help lead to a diversified economy in the long term.

However, it does not solve the long-term issue of how the economy will continue functioning after oil and gas reserves are finished.

In other words, the best-case scenario of an oil and gas sector that is large and profitable for decades to come is that it provides the cash to allow the government to continue functioning, much in the same way as it does now. But this only puts off the inevitable need to build other sectors of the economy.

It is important to note that even with this most optimistic view of the oil and gas sector, it will not unlock broad-based economic development directly, and the resulting employment creation will be small and insignificant. For example, the 2017 Acil Allen study into the Greater Sunrise project, which includes both of the offshore activities, the operation of the proposed LNG facility in Beaco, and the other Tasi Mane development activities, suggests there will be around 13,000 new jobs created. Almost all of these indirect jobs created will be through related improved transport infrastructure.

This projection is based on some quite unrealistic assumptions, that make such a good outcome quite unlikely. But even if we accept this prediction, 13,000 jobs is very small compared to the vast number of working-age adults in Timor-Leste who do not have formal employment (at the time of the 2015 Census, more than 500,000 working-age adults did not have formal employment). More than 30 projects like Tasi Mane / Greater Sunrise would be needed in order to create sufficient jobs for this mass of under-employed working age people.

It is also important to note that even in this best-case scenario, the growth that will come about will mainly benefit middle and upper-income sectors of the economy—as is currently the case. As well as only providing a small number of jobs, the types of jobs that will be created will be for skilled technicians. It will have limited impact on most poor people, who work as subsistence farmers and do not have access to such education and vocational skills training. Given the high education required, it is very unlikely to assist those who are traditionally marginalised, such as poor rural women, or people with disabilities.

Execution Matters

As noted above, it is clear that the risks in the current economic development strategy are very high. The proposal is for more than \$8bn to be invested in one LNG facility, which represents half the sovereign wealth fund, and is four years' worth of GDP. It is generally unwise for any investor, whether it is a private company or a country, to invest so much money in a single venture, in case it fails and there is not enough money left to pursue a different strategy.

There are also other downside risks to be considered. For example, even if oil and gas reserves continue to flow, money can be wasted on airports, ports or roads that are out of scale with need, or on development visions that are simply not realistic. There are serious questions whether Oecusse and Suai will generate enough economic activity to give a reasonable return on investment for the airports and other infrastructure that has been built, or that is in the process of being built. There are also questions about specific projects to be implemented: for example, can the extra cost of a four-lane southcoast highway be justified in terms of the economic benefit it might create, when an improved two lane main road might achieve the same result at only one-fifth of the cost per kilometre? Each decision made here has a high financial cost and much uncertainty about the economic returns.

Opportunity cost is also important. What is being sacrificed, for the sake of front-loading investment on large-scale infrastructure, and supporting the oil and gas industry? Could the benefits of alternative spending, for example on bottom up projects supporting the agriculture sector, be significantly higher?

The Worst Case Scenario of the Current Development Path

Acknowledging the risks of the current approach, the worst case scenario is that the investments produce infrastructure projects such as large-scale airports and ports and roads that will not have the volume of use to justify the expense.

Similarly, the Tasi Mane and Greater Sunrise projects will potentially use up the petroleum fund reserves very quickly with the large-scale capital investments needed for the various projects, if outside investors cannot be found. If these projects do not produce the economic returns that are hoped for, there will not be a flow of revenue to replace the petroleum fund income.

Under this scenario, once the oil money runs out, if there is little other growth to replace it, GDP is likely to decline significantly, and the government budget will be severely restricted.

As some acknowledgement of this potential shortage in revenue, the government expects there could be a need to steadily increase borrowing from multilateral institutions to finance the budget into the future.

The most recent IMF Country report projects an Oil GDP of \$0 by 2024, and a government debt of \$666m by that year (International Monetary Fund, 2019). These increased levels of borrowing will allow the Government to avoid a decline in government spending once petroleum fund reserves are no longer available, but they are loans which will ultimately need to be repaid. It must be some concern to the citizens of Timor-Leste that their future ongoing budget will likely be so heavily reliant on loans. These borrowings will need to be spent well in order to avoid handing a high burden of servicing debt to future generations.

An Alternative Development Path

Economic diversification, embracing a bottom up approach to development, represents an alternative path to developing the Timor-Leste economy. Different sectors require different approaches, however there are also some commonalities in what is needed to improve people's productivity. Greater investment in health and education to improve people's productive potential is important. More and better basic infrastructure such as roads linking farms to potential markets, or water for irrigation is important. Greater and more strategic investment for selected industries that can be internationally

competitive, such as niche organic produce, and/or that are good potential products for import substitution is also important.

Taking such a bottom up approach does not mean that the oil economy should be ignored: quite the opposite. Current oil revenues provide an important opportunity for the Timorese leadership to invest in these other sectors. This source of income should be strategically developed and leveraged.

There are good international examples where a bottom up approach has worked. For example in Cambodia, poverty rates were halved in less than seven years, from 53% in 2004 to 21% in 2011. This occurred almost exclusively via improved agricultural productivity among small farmers, giving lots of support to improve access to markets with rural roads, and to increase productivity. Because there was a focus on better livelihoods amongst small farmers there was also only small growth in the urban population, only rising from 19% urban in 2004 to 21% in 2011 (World Bank, 2013).

While the situation is becoming increasingly urgent, there is still an opportunity to take a similar bottom up approach in Timor-Leste. For example, there are positive projections for growing the organic coffee industry: an up-front investment of \$150m could produce estimated revenues of \$300m per year and 77,000 new jobs—compared with only 13,000 jobs from an \$11bn investment in the oil sector (Inder & Qu, 2019). Achieving such results would require a strategic, integrated approach to building this sector, but is clearly possible taking a bottom up approach.

REFERENCES

1. Cornwell, K., Inder, B. and Datt, G. (2015), *Measuring Poverty and Wellbeing in Timor-Leste*, Monash Centre for Development Economics and Sustainability, Research Paper Series on Timor-Leste, RP-TL3.
2. ICG (2013) *Timor-Leste: Stability at What Cost?*. Asia Report 246 (8 May). Available at: <http://www.crisisgroup.org/~media/Files/asia/south-east-asia/timorleste/246-timor-leste-stability-at-what-cost.pdf>
3. International Monetary Fund (2019), *Democratic Republic of Timor-Leste: Staff Report for the 2019 Article IV Consultation*, IMF Country Report 19/124.
4. Inder, B, Balachandran, R, Nan Qu & Benevides, C. (2018) *Putting the Economics into Timor-Leste's Economic Development Story*. Centre for Development Economics & Sustainability, Monash University. Research Paper Series on Timor-Leste RP-TL8. Melbourne: Australia.
5. Inder, B. & Nan Qu (2019) *Coffee in Timor-Leste: What do we know? What can we do?* Monash University, Melbourne: Australia.
6. Lin, J. (2012), *New Structural Economics*, Washington, D.C.: World Bank.
7. RDTL (2019) *Budget Books 1-4*. Dili: Timor-Leste
8. Scheiner, C. (2019) *As the Oil Runs Dry: Timor-Leste Economics and Government Finances*. La'o Hamutuk, Dili: Timor-Leste.
<https://www.laohamutuk.org/econ/briefing/AfterOilRunsDryCurrentEn.pdf>
9. UN Women & World Bank (2018), *Women Farmers in Timor-Leste: Bridging the Productivity Gap*, UN Women & World Bank, Dili; Timor-Leste.
10. Valters, C., Dewhurst, S., de Catheu J. (2015) *After the Buffaloes Clash: Moving from Political Violence to Personal Security in Timor-Leste*. Case Study Report. Overseas Development Institute, London: UK.
11. World Bank (2013), *Where Have all the Poor Gone? Cambodia Poverty Assessment 2013*, World Bank. Cambodia.
12. World Bank Group (2016), *Poverty in Timor-Leste 2014*, retrieved from: <https://openknowledge.worldbank.org/handle/10986/25269>
13. World Bank Data (2019). Available at <https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=TL>. Accessed 26 July 2019.

