



A VAT for Timor-Leste-Some Policy and Design Considerations¹

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Preface

At the request of the Chairman of the Fiscal Reforms Commission, Mrs. Fernanda Borges, the Asian Development Bank arranged for Dr. Ehtisham Ahmad (LSE and University of Bonn) to visit Dili in June and August 2015 to follow up on his earlier work that had recommended a Value Added Tax as part of a strengthening of domestic resource mobilization (see Ahmad and Rabanal, ADB 2010). The earlier work built on a DSA conducted on behalf of the Japan International Cooperation Agency, to examine measures to ensure long-term fiscal sustainability in the light of limited petroleum resources and the need to preserve the assets of the Petroleum Fund.

We are grateful to the Chairman of the Fiscal Reforms Commission, Fernanda Borges, for guidance and support throughout the process.

Very useful discussions were held with the Prime Minister, Dr Rui Maria de Araujo, Senior Minister, Xanana Gusmao, Coordinating Minister for Economic Affairs, Estanislau da Silva, Minister for Foreign Affairs and Cooperation, Hernani Coelho, Secretary of State for the Council of Ministers, Avelino Marfa Coelho da Silva, Finance Minister Santana J.R.F. Viegas-Cardoso, Vice Minister of Finance Helder Lopes, former Finance Minister Emilia Pires, Minister for Petroleum and Natural Resources, Alfredo Pires, Vice Minister of Education, Dulce Jesus Soares, MECAE Senior Advisor Jose Goncalves, DG National Revenue Administration, Monica Rangel, DG Customs, Jose Fatima Abilio. The Central Bank Governor also provided very helpful suggestions.

A series of seminars was conducted in June as well as October, to explain the concepts and issues involved with a VAT to the PM, Cabinet, Officials in the Presidency, Ministry of Finance and related Departments, MECAE, the Ministry of Petroleum, and the Central Bank. Seminars were also held for Members of Parliament, Political Parties, NGOs, academics and the private sector, both to explain the proposals and to elicit comments.

Helpful comments on earlier drafts were received from Nikunj Soni, Epifanio Martins and the staff of the Fiscal Reforms Commission and the Ministry of Finance.

The work has been carried out under the general supervision of Mrs. Borges and David Freedman, ADB Country Economist for Timor-Leste.

I. Executive summary

1.1. Why should Timor Leste Consider a VAT?

A VAT is a tax on consumption that is collected in each stage of the production process. **This tax is now a main source of revenue generation in developed as well as developing countries alike** due its range of desirable features.

The VAT can help Timor-Leste achieve a number of objectives, such as:

- **Modernize the tax system and improve collections.** The VAT does this by generating information **on the key elements of value added (wages and profits)** and improving record keeping. This can help reduce cheating and improve collections in other taxes (particularly the income taxes).
- **Raise revenues more efficiently.** VAT reduces the number of tax instruments the administration has to manage in order to collect a given level of revenue. In the case of Timor-Leste, it could largely replace import duties, and both the sales tax and the service tax would become redundant.
- **Create a level-playing field and reduce the cost of doing business.** As the VAT is a tax on consumption, with proper design it should not "stick" to businesses. And because it works through a system of invoice-backed refunds at different stages in the value chain, it creates incentives to comply that are even across all firms and sectors in the economy.
- **Improve the business environment and attract investment.** The increased documentation of transactions induced by a VAT increases transparency and confidence in the economy. Zero-rating exports, as is recommended, turns the whole country into a de-facto tax-free zone for exports. Both of these features will make Timor-Leste a more attractive destination for investment.
- **Reduce informality in the economy.** The VAT provides an incentive for the "input taxed" or informal sectors to take advantage of the crediting/refund mechanisms to come into the VAT net. If they do not take advantage of the VAT crediting mechanism, they will face a competitive disadvantage relative to those traders who do. It is clear that these incentives only operate if there is efficient coverage of the value chain and if the threshold is not set at too high a level.

1.2. What design characteristics should VAT for Timor-Leste have?

In general, the recommendation is to *keep it simple*.

Consequently we recommend that for TL

- The VAT should be consumption-based. That is, the design of the tax should as far as possible ensure that the tax falls on final consumers and does not "stick" to businesses. This includes issuing credits to businesses for taxes paid on the purchase of capital goods.
- In principle, the VAT should cover all goods and services that enter into the value chain. This way the full incentive effects are realized, and there is full information to be able to make refunds or credits on exports.
- There should be a single rate for the VAT. A VAT with multiple rates, which is sometimes attempted in order to favor certain sectors or industries, opens up opportunities for cheating and adds to the complexity of administration.
- Zero-rating should be limited to exports. As with multiple rates, zero-rating introduces incentives to cheat because it is hard to verify whether sales were in fact linked to a zero-rated product. However, it is relatively easy to verify whether a product has been exported, so zero-rating exports is much less susceptible to cheating. Zero-rating exports is also a powerful incentive for investment as it effectively turn the whole country into a duty-free zone.
- Exemptions should be limited to non-processed foods. Exemptions, especially in the middle of the value chain, add to the cost of doing business due to cascading and weaken the documentation of economic transactions, eroding the self-policing aspect of a VAT and decreasing transparency. Non-processed foods, however, do not enter the value chain and can therefore be safely exempted, to protect more than 60% of the consumption the poor in TL.

1.3. How much revenue will the VAT raise?

The VAT should be seen as part of a "package" of tax policy reforms linked to enhanced social and investment spending as well as modernizing the tax

administration. The main idea is to both improve the sources of financing for social spending and to improve the investment climate while reducing the costs of doing business in TL. The domestic resource mobilization agenda is also closely linked to the need to restrict withdrawals from the Petroleum Fund beyond the ESI to productive investments.

A number of simulations have been carried out-with the main case reflecting the projections by the MOF for GDP growth and investment in the period to 2018. Although it is recognized that a VAT will not be in place by then, the estimates assume that a VAT is applicable from 2018, and show potential trends.

- **A 5% VAT would improve the competitive position of Timor-Leste but would not raise much additional revenue in the short-to-medium term.** However, the level of efficiency of the tax administration could reasonably be expected to increase over time due to the information, transparency, and documentation effects of VAT, and this would increase revenues relative to the no-VAT scenario in the long term.
- **A 10% VAT with existing or improved efficiency would yield around \$80m in revenue by 2020** (assuming a reduced share of consumption in value added); and between \$100m-\$125m if the share of consumption in value-added is maintained. This would take Timor-Leste significantly towards the \$345m (roughly 15% of non-oil GDP) goal set for 2020 by the Fiscal Reform Commission, without relying on unrealistic projections for excises or withholding taxes. **Given the pressing need to generate additional revenue in Timor-Leste, we recommend adopting the 10% rate.**
- **If lots of exemptions and zero-rating are incorporated into the VAT revenue collections could actually go down relative to the status quo.** This temptation must be avoided, and any additional revenues generated by the VAT should be used efficiently for social programs or investment

1.4. What will be the impact of a VAT on prices, poverty and distribution?

A 5% VAT would have a negligible net price impact on tradables. The 2.5% customs tariffs plus 2.5% sales taxes on imports, and the service tax would be replaced by a 5% VAT, so that effective taxation on tradable would remain the same. The impact on non-tradables (final consumption) goods and services will not be large, since many of the components of domestic value chain at present (especially storage, distribution and retail) are among the "hard to tax sectors" that typically represent a fraction of the VAT revenues generated.

Replacing the taxes at the import stage by a 100/o VAT will clearly generate relative price changes. Prices will experience a *one-time* adjustment as businesses pass on the higher effective tax rate to consumers, and this will vary depending on the production structure (input-output tables are needed for estimating these effects— along the lines of Ahmad and Stern, 1991-see Annex 2).

Changes in relative prices in the short-run do not mean higher inflation, which is a monetary phenomenon. Indeed, if the relative price changes result in compression in aggregate demand, there may well be a reduction in inflationary pressures.

The poor can be protected from the effects of short-term relative price changes if non-processed foods are exempt from the VAT. This would make the VAT relatively progressive in Timor-Leste. Non-processed food forms a significant portion of the consumption baskets of the poorest quintile (60%) and this is even higher for the poorest decile. At the same time, non-tradable services that are not currently taxed under the current customs and sales taxes on imports would be subject to the VAT. These are likely to be consumed by the rich. Consequently, one would expect that the VAT in TL on its own would improve the distributional impact of the tax system.

However, other tools such as excises on luxury items are necessary for further improving the distributional impact from the tax system. Increasing excises will likely not raise much additional revenue but should nonetheless be considered as a means of increasing equity. This could be supplemented as well with an improved income tax with a higher rate band. An improved performance of the income taxes with information on the value added chain (wages and profits) because of the operation of a VAT can also help improve the overall distributional impact of the tax system.

Additional excises are also needed to supplement a single rate VAT in order to discourage the consumption of goods that cause harm to individuals or the society at large. The consumption of goods that negatively impact health (e.g., on tobacco or alcohol), safety and security (firearms and alcohol) as well as the environment (e.g., carbon-related commodities) should be discouraged. In order to do this it is preferable to impose excises than to use differential VAT rates. These excises also tend to enhance revenues, but may have an impact on the consumption of the poor.

The overall distributional impact of the tax system also depends on how the additional resources collected are used. Whether or not additional revenues are used for sustainable investment, growth, job creation and social services such as education and health care, or redistributed to "compensate" those affected by the relative price changes, has an important impact on the progressivity of the overall system.

1.5. What are the practical considerations to keep in mind in the design of a VAT?

A number of practical design issues emerge from the policy framework. Many of these will be taken up in greater detail by the tax administration mission to follow.

- Liability for the VAT should be on registered businesses. They can then pass on the tax to final consumers in the prices they charge.
- Businesses must be able to claim VAT credit for any VAT that they have paid on inputs to their business activities. It is particularly important that the system for issuing credits is swift and efficient.
- Prices shown to final consumers on price tags and other advertising should include the VAT. That is, the amount of the VAT should be included in the price, but not separately shown-this has an important role in increasing the overall acceptability of the new tax.
- The legal threshold for the VAT registration should be set to zero, with a variable effective threshold. Setting the legal threshold to zero would allow the tax administration to audit any establishment. The effective threshold could then be based on administrative considerations and the ability to implement a full accounts based mechanism and also a simplified system of cash-based transactions and issuance of electronic invoices. Given the available data, our recommendation is that the effective threshold be set at no more than \$100,000 annual turnover.
- VAT invoices must specify the VAT inclusive price, and the amount of the VAT included in the price. This is because the tax invoice is the basis for claiming VAT credits, and for controls and compliance.

1.6. Are there any special considerations to be taken regarding the implementation or impact of a VAT in particular sectors?

1.6.1. *Petroleum sector and large investments*

- It is important that the oil and gas sector should be within the scope of the VAT. This is crucial to establishing the magnitude of transactions in the petroleum sector, and to stop the cheating.
- As suppliers of equipment and services pay much of the VAT in the petroleum sector, it is important to ensure that these resources are available in the future for credits or refunds at the time the investments start generating revenues. The Central Bank has agreed to open an interest-bearing "investment account" that would facilitate the repayment of the VAT on inputs in future years.
- With the above system in place, there will be a need to generate accurate nested forecasts for cash requirements above the minimum required to operate the Treasury Single Account that is authorized by Parliament. In order to do this, a cash management unit should be established in the Treasury.
- Similar issues arise with large investments that will generate a need for credits or refunds in future years, including, say ports or airports, or railway systems.
- No special provisions are needed for PPPs, which should be subject to a normal VAT.

1.6.2. *Financial Sector*

- The financial sector should not be exempt. Exempting it would create a number of distortions, as needed input tax credits would not be available to many businesses, especially in the modern economy with the new structure of financial services.
- Our recommendation, following modern VAT approaches is to restrict the scope of exemptions for financial services. Exempt services should include: 1. Certain margin services in banking and insurance; 2. Consideration in the form of interest, dividends, and sales of financial instruments, and; 3. Life insurance, following the practice in most other countries.
- Property and casualty insurance should be subject to a VAT. This is the practice in modern VAT regimes such as that in New Zealand.
- Zero-rating should be limited to transactions with the rest of the world. As mentioned above, countries generally zero-rate international financial transactions with or for nonresidents.

1.7. Where should the VAT apply?

1.7.1. *Free trade zones*

- Under a standard design endorsed by international agencies free trade zones are typically treated as being outside the country.
- Goods entering into the free trade zone from outside Timor-Leste should not be subject to customs duties or excise taxes.
- Supplies entering a free trade zone should be subject to the VAT, and subsequently credited and refunded to the firm in the free trade zone when the good is exported. This approach addresses the danger of leakage and the need to establish the true magnitude of transactions in the free trade zone.
- Goods entering TL from a free-trade zone are subject to the normal import rules, and should therefore be subject to the VAT.

1.7.2. *Services*

The VAT is a consumption tax and should be applied on a destination basis. This means that goods and services should be taxed where consumed.

Defining the place of consumption of services is often very difficult and usually unworkable in practice. International practice therefore is to use proxies to predict the place of consumption for each category of services, and apply the VAT accordingly. These proxies are called place of supply rules.

- Services supplied by businesses established in the country or through a fixed place in the country, should be taxable in the country. The concept of 'fixed place' needs to be defined. Usually a fixed place for VAT purposes requires less presence than a permanent establishment for income tax purposes. Exported services should be zero-rated. Zero-rating should only apply to services rendered wholly outside the country.
- Imported services (i.e., services supplied by non-residents to resident recipients, including a fixed place of a non-resident), if taxable according to the place of supply rules, should be taxed in the hands of the resident recipient if he is a taxable person and is not entitled to (full) input tax credits ("reverse charging").

1.8. What preparatory work is necessary in order to introduce a VAT?

The sequencing of measures depends in large part on the ability of the administration to manage a self-assessment system together with strengthened audit and sanctions. This requires a significant effort on the tax administration side in tandem with an enabling legal framework.

There are parallel efforts underway in order to prepare the tax administration in order to be able to implement a VAT, and to draft the needed legislation for the TL VAT.

Some considerations that will arise in this context that will require very careful coordination with the policy objectives follow.

- Self -assessment is the only viable approach to administering a VAT. Under this approach, taxpayers are responsible for calculating and paying their own liability. Only basis information is sent to the tax administration. Compliance is based on risk-assessment and post- return audits.
- The administration of the VAT should be the responsibility of a tax department and integrated with the management of other domestic taxes.
- A modern information technology (IT) system is required for efficient and effective VAT administration. In particular, an IT package that integrates core tax administration processes and provides for the coordinated administration of a range of taxes (particularly linking the VAT and income taxes) is highly desirable. Investment in such systems and technology will pay dividends in both implementation and tax administration long-term.
- The tax administration mission to follow will prepare the conceptual design for this IT system.
- A modern taxpayer identification number (TIN) will be required for the VAT registration process. Registration systems that are old and that do not use high integrity taxpayer numbers will not be suitable for VAT. Re-registration of taxpayers will in any event be required to gather the specific information needed for the VAT.
- Professionally developed campaigns to prepare and educate the community about the VAT and the reasons for its introduction should be ready and activated as soon as the decisions on major policy settings and implementation dates have been made.

- A minimum of 6 months and preferably a year from when the VAT law is passed should be allowed to complete the taxpayer registration process properly and to ensure a high-quality registration database. Successful VAT implementation and operation, and the credibility of the system will be jeopardized if the registration data is not maintained to the highest level.
- Good information about the potential taxpayer base for a VAT is required before detailed planning can commence. Projects to establish the potential base by turnover size of entity and other key variables should be commenced as soon as possible to supplement the business survey information that is at odds with the information on taxpayers available currently in the tax administration.
- The VAT administration involves refunding large amounts of excess credits, and the tax administration should be in a position to process refunds speedily before a VAT is introduced. Fast processing of refunds balanced with checks to ensure that they are valid is an important part of the administration cycle.
- Efforts should be made to create a compliance environment that encourages taxpayers to comply "voluntarily". This will require a combination of ensuring that taxpayers know how to comply, a strong framework of penalties in the law, and a highly visible active compliance program undertaken by the administration. A combination of direct compliance strategies (including refund checks, audits and fraud investigations is required.
- A formal risk assessment model should be used to understand the key risks and ensure that compliance strategies are aligned to them. Risk should be assessed from multiple perspectives such as taxpayer segment, industry, and the different VAT risk areas (real revenue, timing and technical).

A tax administration mission (in November 2015) will assist in developing the strategic directions, detailed work plan, and a conceptual design for the IT system.

1.9. When should a VAT be introduced?

The timing for the VAT introduction has to dovetail with both the economic requirements for sustainability as well as the political timetable. The principal components include the following:

- Much of the agreed tax policy design for the VAT, excises, income and local taxes needs to be in place by the end of 2015.
- The legal framework for the new VAT law, revisions to the income tax law, and developing the basis for local tax framework needs to be developed to begin to be discussed by Parliament during the period January-June 2016.
- Businesses will need adequate time to prepare for their VAT implementation and on-going management. A year between the passing of VAT law and VAT commencement should be allowed.
- Given the tax administration timetable (to be finalized by the tax administration mission), it is unlikely that a VAT can be implemented in TL before 2018 at the earliest.

II. Introduction

11.1. Main objectives for Tax Reforms and a VAT in Timor- Leste

Balancing the distributional and efficiency considerations for generating appropriate financing as well as incentives for sustainable development form the crux of any tax reform. These issues have been highlighted in the discussion of the Sustainable Development Goals, in the Addis Summit (Ahmad 2015), and at the General Assembly in NY. These considerations are all relevant in Timor-Leste (TL). It is useful to consider how the overall tax and social policy design will meet the sustainable development objectives, and also how specific instruments within the framework should be designed.

Any tax reform exercise has to address the need for revenues, effects on incentives for producers and exports, effects on households, and administrative considerations. The analytical basis for the tradeoffs between efficiency and equity considerations are derived from modern public economics (see Atkinson and Stiglitz, 1980) and the theory of reform that identifies welfare and efficiency options from a given point of departure in developing countries (Ahmad and Stern, 1991). International agencies have typically emphasized simplicity of policy for ease of administration as a guiding principle-(e.g., flat income taxes and single rate tariffs and sales taxes, e.g., as implemented in Timor-Leste). However, the flat nominal tax on imports works through into differential effective taxes in the price of goods (depending on different domestic production patterns), and adds to the cost of doing business that may differ by sector. Moreover, measures to "simplify" a tax system, such as increasing the threshold of the VAT to limit the number of taxpayers that the administration has to deal with, may make it easier to cheat and paradoxically make the task of the tax administration more complicated. Consequently, while simplicity is to be admired, simple-minded solutions, that typically ignore the effects on incentives to cheat and may make the overall tax system more complicated, are best avoided.

The principal objective for a VAT in a small open economy like TL is to reduce the cost of doing business relative to the "simple" flat taxation of imports that leads to cascading with a differential impact on different sectors and households. The current system, introduced with the help of international agencies after independence, also makes it harder for Timorese exporters to compete with those in countries such as Singapore, where exports are "completely free of taxes" accumulated along the production chain. Given the global economic crisis, countries around the world including in the EU (e.g., Portugal) and Latin America (Mexico) are moving from taxes that bear on production and add to the cost of doing business to the VAT in order to improve competitiveness.

An ancillary objective, particularly in countries with widespread informality, is to use the VAT and the information it generates, to stop the cheating,

including with other taxes such as the income tax and excises. Note that the **relevant consideration here is the extent of informality-and** not the size or level of development of a country that the IFIs typically stress. Consequently, there are small island economies in the region, such as Singapore, with relatively low informality, and where it is entirely appropriate to progressively raise the threshold, and they have done so in recent years, to \$750,000. United Arab Emirates and other Gulf Cooperation Council countries are considering an even higher threshold to begin with. However, informality is rife in more advanced OECD countries, including some in Southern Europe and Mexico, and then the appropriate response is to lower the threshold. A relatively high and increasing threshold in Pakistan has led to the virtual collapse of the VAT, and it might be the first major country to abolish it, despite 25 years of support from the International Monetary Fund (IMF) and World Bank and bilateral donors such as the United Kingdom.

Distributional issues are important in all countries, especially in a post-conflict situation, such as in Timor Leste. It is however, a mistake to expect that the VAT will be the government's main social policy tool. Some countries include multiple rates and exemptions in the VAT for distributional purposes and to encourage investment. This quickly makes the VAT unworkable, and it does not achieve the desired objectives or raise revenues for that matter, and merely opens up the avenues to cheat. As we shall argue in this paper, **beyond leaving out unprocessed food** that is very important in the consumption baskets of the poor, a **VAT should be administered at a single rate with minimal exemptions to generate full information that stops cheating, including for the income taxes.** This also provides the basis for imposing excises on luxury goods or on "bads", such as tobacco products and alcohol, and emissions and carbon use that disproportionately affect the lives of young children and mothers. **The additional revenues generated can then finance more active social policies and investment** for sustainable growth and employment generation.

In addition, even in small unitary states, the issues of differential revenue requirements, opens up the issue of potential game-play between levels of government. Again, given uneven tax bases even in small countries, the issues of sub-national taxes and transfers needs to be considered together as part of the policy design framework that might seek to ensure a unified economic space, as well as minimum living standards (see Ahmad and Brosio 2015). In particular the role of tax policy is critical in ensuring accountability for local spending on public services and investments (Ambrosia no and Bordinon 2015). But, this objective can easily be negated by poor design of "equalization" or special purpose transfers.

The complex inter-linkages between multiple objectives and single instruments can lead to significant errors if a single instrument such as the VAT is considered in isolation, and subjected to "simple-minded" rules of thumb. Consequently, while this paper focuses on the VAT, it takes as its starting point the full gamut of fiscal instruments at the disposal of the TL Government, including measures on the spending side.

In the sections to follow, we identify issues and options with respect to specific objectives for the VAT. We present the key components of a proposed VAT for consideration by the Fiscal Reform Commission and the Ministry of Finance to address key decisions that need to be taken to implement a workable set of interrelated tax and social policy measures. The context and complementary measures matter as we emphasized above, since a VAT quickly becomes unimplementable if it is also required to meet equity and industrial policy objectives of the government that are better served with other tools.

11.2. Timor Leste context

A flat rate income tax and a simple system of flat customs and sales tax on imports had been implemented in TL since independence, at the recommendation of the international agencies no doubt given a relatively simple structure of the domestic economy (other than the petroleum sector) and limited administrative capacity. However, the *Tax and Duties Act of 2008* significantly reduced direct and indirect tax rates. Given the recognition that the flat rates of customs and sales taxes on imports added to the cost of doing business in TL, import duties and sales taxes were each reduced from 6% to 2.5%. Further, given a tendency to lower income taxes during the last decade, income tax rates, on both business/corporate and individual wage incomes, were cut from 30% to 10%. In addition, indefinite loss carry forward provisions combined to make the TL tax system the most generous in the region. A service tax is also imposed on hotel and restaurant services, as well as telecommunications. Given that services form an increasingly important element of activity in a modern and growing economy, and it is often difficult to distinguish between a good and a service,³ it is critical to bring services into the VAT net to reduce the cost of doing business, and also to generate revenues with minimal cheating.

Yet, there was very limited FDI. In 2010 the Government decided to award tax holidays in addition to the indefinite loss carry forward (LCF) provisions. This effectively overrode the LCF provisions, biasing investment to shorter time horizons. Even then, the investment did not materialize. It is clear that a key element of attracting FDI is to provide enabling infrastructure in TL, as well as enhanced local services. Both add to the domestic resource mobilization requirements, even if there is (orderly) access to the financial markets.

The net effect of the tax rate reduction measures in 2008 was to significantly constrain domestic revenue potential. In light of uncertain petroleum revenues and significant spending pressures, as highlighted in Ahmad and Basu (2010), the tax rate reductions heightened the vulnerability of the TL public finances.

³ An interesting case in the Indian Supreme court has been a dispute as to whether a SIM card is a good or a service. The problem is compounded, e.g., in Brazil, where there is a dispute as to whether an aircraft engine is a good-when only the outer-casing is purchased-or a service, as the inner turbine is leased.

11.3. The Current Tax System and Fiscal Sustainability

Increasing domestic revenue is a critical element in guaranteeing fiscal sustainability in Timor-Leste. The Minister of Finance established a \$200 million domestic revenue target in 2010. This was to be achieved within a 3-5 year period, and as discussed in Ahmad and Rabanal (2010) appeared at the time to be consistent with a modified 'golden rule' for public spending. Under such a rule, recurrent expenditure was to be covered by domestic revenue plus Estimated Sustainable Income (ESI) withdrawals from the Petroleum Fund (PF), while PF drawdowns in excess of ESI and possibly borrowing were to be reserved for financing productive investment, subject to standards of debt sustainability and minimum rates of return.

Taxes on imports (import duties and sales taxes) and the service tax fall on firms doing business, and cascade through the system adding to the cost of doing business. Given the absence of an input-output table for Timor-Leste, we are unable to estimate the full effects of this cascading. But the current system has clearly added to the poor FDI performance and the additional calls for tax-free zones to attract investment.

Given that extensive tax holidays were put in motion, the only possible way to achieve the revenue target set in 2010 for 2015 was to move quickly to a VAT, in order to avoid adding to the cost of doing business by jacking up the taxation of imports. However, Ahmad and Rabanal (2010) warned that it might take between two to three years to bring the tax administration up to scratch to be able to implement a VAT, and the tax rates would have to be set commensurate to revenue need.

As we see from Table 1, the performance on revenue collections (\$168m in 2014) is very likely to have fallen short of the specified target for 2015 of \$200m, and if it had not been for the amorphous "withholding" tax to make up for the "gaps" in the income tax introduced in 2010-especially the tax holidays, the performance would have been even worse. Unfortunately, there has been no progress on modernization of the tax administration, and Timor-Leste is still two to three years away from implementing a VAT.

More recently and within the context of a comprehensive fiscal reform, the Fiscal Reform Commission of the Ministry of Finance has set a domestic revenue goal for 2020 of 15% of non-oil GOP. Assuming that GDP evolves according to the current forecast by the National Directorate of Economic Policy, this goal is equivalent to a revenue target of \$345 million by the end of the decade. Despite some fairly optimistic growth projections (see Annex 1), it is clear that a no tax

reform scenario will not generate anywhere close to the new target (the business as usual target is forecast at \$210m (see Table 2).

Table 1. Tax Collections in Timor-Leste, 2008-2014 (\$US)

	2008	2009	2010	2011	2012	2013	2014
Taxes on commodities	15,570,878	27,368,915	28,449,770	46,742,876	56,903,206	60,888,908	67,493,267
Excise Tax	7,307,160	13,825,562	16,882,838	22,021,784	27,136,002	34,316,088	39,583,915
Export Duties					1,107		
Import Duties	4,347,467	6,276,503	5,482,186	15,242,981	13,441,461	12,490,378	13,363,994
Sales Tax	3,916,252	7,266,850	6,084,746	9,478,112	16,324,636	14,082,442	14,545,359
Taxes on income	17,927,824	13,278,992	18,160,597	28,267,540	37,223,826	39,939,847	52,928,221
Corporate Taxes	6,450,855	2,011,868	4,485,345	6,747,005	6,473,925	9,594,329	7,992,375
Individual Income Tax	909,744	533,865	675,038	664,665	752,051	901,500	1,271,192
Individual Income Tax Others	4,012,106	4,576,466	4,847,525	7,600,649	6,645,896	8,259,411	15,494,569
Withholding Tax	6,555,120	6,156,792	8,152,689	13,255,221	23,351,954	21,184,608	28,170,086
Service tax	3,834,773	2,885,111	3,486,419	3,961,440	4,397,537	3,528,142	3,214,535
Service Tax	3,834,773	2,885,111	3,486,419	3,961,440	4,397,537	3,528,142	3,214,535
Other tax revenues				7,809	62,027	189,560	115,743
Other Tax Revenues				7,809	62,027	189,560	115,743
Total Tax Revenue	37,333,475	43,533,018	50,096,786	78,979,665	98,586,596	104,546,457	123,751,766

Source: Timor-Leste Transparency Portal

Table 2. Revenue projections to 2020 in a no fiscal reforms scenario

	2014	2015	2016	2017	2018	2019	2020
<i>Tax Revenue</i>	<i>123.75</i>	<i>125.52</i>	<i>116.39</i>	<i>121.45</i>	<i>126.55</i>	<i>131.77</i>	<i>136.97</i>
Excise	39.58	44.39	35.59	35.46	35.33	35.19	35.06
Import Duty	13.36	15.92	11.84	12.32	12.81	13.32	13.86
Sales Tax	14.55	15.78	13.71	14.26	14.83	15.42	16.04
CIT	7.99	7.80	7.80	8.10	8.40	8.80	9.10
PIT	16.77	18.33	15.47	17.54	19.62	21.69	23.77
Withholding	28.17	19.49	28.97	30.64	32.30	33.96	35.62
Service Tax	3.21	3.60	2.78	2.89	3.01	3.13	3.25
Others	0.12	0.21	0.23	0.24	0.25	0.26	0.27
<i>Non-tax revenue</i>	<i>44.22</i>	<i>44.83</i>	<i>55.02</i>	<i>59.46</i>	<i>63.93</i>	<i>68.84</i>	<i>73.30</i>
Domestic Revenue	167.97	170.35	171.41	180.91	190.48	200.61	210.27

Source: Timor-Leste Budget Book 2016, volume 1

Table 3. Collections requirements by tax to meet Fiscal Reform Goal with current taxes keeping 2014 revenue structure

	2014	2015	2016	2017	2018	2019	2020
<i>Tax Revenue</i>	<i>123.75</i>	<i>139.58</i>	<i>157.43</i>	<i>177.57</i>	<i>200.28</i>	<i>225.89</i>	<i>254.78</i>
Excise	39.58	44.65	50.36	56.80	64.06	72.25	81.50
Import Duty	13.36	15.07	17.00	19.17	21.63	24.39	27.51
Sales Tax	14.55	16.41	18.50	20.87	23.54	26.55	29.95
CIT	7.99	9.01	10.17	11.47	12.93	14.59	16.45
PIT	16.77	18.91	21.33	24.06	27.13	30.60	34.52
Withholding	28.17	31.77	35.84	40.42	45.59	51.42	58.00
Service Tax	3.21	3.63	4.09	4.61	5.20	5.87	6.62
Others	0.12	0.13	0.15	0.17	0.19	0.21	0.24
<i>Non-tax revenue</i>	<i>44.22</i>	<i>49.87</i>	<i>56.25</i>	<i>63.44</i>	<i>71.56</i>	<i>80.71</i>	<i>91.03</i>
Domestic Revenue	167.97	189.45	213.68	241.01	271.83	306.60	345.81

Source: Authors' calculations.

However, the \$345m target for 2020 could in theory be achieved by jacking up excises and the taxes on imports. This hypothetical scenario is illustrated in Table 3. Here we assume that the structure of revenue collections remains constant and that domestic revenue as a percentage of GDP increases at a constant rate to 15% of non-oil GDP.

It is clear that the ramping up excises to meet the revenue target is an unlikely prospect, given that the base for excises is extremely narrow and the demand for luxury items (such as cars and durables) is highly elastic. Unfortunately, the complete demand systems needed to estimate revenue effects (including both own- and cross-price elasticities, *e.g.*, using Deaton's Almost Ideal Demand System, see Ahmad and Stern, 1991 for an application) are not available for Timor-Leste. However, given the distributional characteristics of consumption of excisable goods (other than petroleum) from the latest household survey, it would appear to be very unlikely that excises can increase enough to single-handedly push collections to the 2020 target, which would imply more than tripling excise collections.

Of course, increasing import duties is not a feasible option, especially in the context of the ASEAN Free trade zone. Putting up sales taxes on imports (with a corresponding increase in a possible final point sales tax) would be permissible but would have the same effect of adding to the cost of doing business, and would not be desirable.

However, if the caveat regarding ASEAN were to be ignored, an increase in customs and sales duties could be easier to justify, provided there was a significant increase in rates. This would be needed to offset a likely downturn in imports (consistent with the past couple of years), reflecting balance of payments concerns. The rising trend based on the "import binge" during 2008-2012 is unlikely to be sustainable, and would need to be verified within a proper macroeconomic modeling exercise (this is beyond the scope of our current paper).

Although unrealistic, the thought experiment of Table 3 serves to illustrate the point that small island economies such as Timor-Leste tend to have an important advantage in that it is relatively simple to collect revenues at the point of import. Consequently, such economies tend to have relatively high efficiency of collection. The import duties and sales taxes generate an efficiency of around 42%, and we take this as the starting point for the tax reform options that follow.

III. A new domestic resource mobilization package based on a VAT

The goal of increasing domestic resources cannot rest on any single tax instrument. Ahmad and Rabanal (2010) recommended that the additional domestic resource mobilization "package" should be based on:

- A VAT as the main new instrument to replace customs and sales taxes on imports, as well as the service tax, to improve the competitive position of Timor-Leste, raise revenues in an efficient manner, and also generate information on the value chain that would eventually also help with the administration of the income taxes, as well as other commodity based taxes.

For distributional objectives and in order to influence consumption patterns due to externalities-such as health care and welfare of women and children, or controlling emissions and pollution-the VAT would need to be supplemented by other taxes including:

- Excises on commodities consumed by the rich for distributional purposes-including durables such as cars;
- Excises on commodities with negative externalities, such as tobacco and alcohol or petroleum products;
- A 'green tax' or an excise on carbon usage and emissions plus an appropriate pricing regime; and
- Local land and property taxes, or equivalent "community charges."

In addition, there needs to be an effort to review the structure of income taxes and withholding measures, and this is a separate exercise being undertaken under the aegis of the Fiscal Reforms Commission. As we stressed earlier, the possible cheating and evasion of income taxes, or production shares, can be blocked with the full information on the value chain generated by a properly designed VAT. However, we assume that the potential for increasing revenues from income taxes in any significant manner in the medium-term in Timor-Leste is likely to be limited. Indeed, there may even be a revenue-loss if withholding taxes are replaced by the full income tax without a major improvement in administration in the medium-term.

The modernization of the tax administration is being addressed separately. As is the case in many emerging market and transition countries, the introduction of a VAT can facilitate the introduction of a streamlined and efficient tax administration. This is typically based on a market-friendly functional structure, based on self-assessment, timely generation of information, and audit that is also needed for the administration of other broad based taxes, including excises and the income tax.

Somewhat different issues arise with respect to a property tax, which may be administered separately including at different levels of government (see Ahmad, Brosio and Poschl, 2015).

Although the precise timetable for the tax administration modernization will be specified in the parallel exercise, for the revenue-potential exercise we will have to assume that a VAT cannot be implemented before 2018 at the earliest.

The main advantage of a small island economy like Timor-Leste, is that the VAT would still generate revenues from the existing base at the import stage, while removing all taxation from exports. This would effectively make the whole of TL into a free trade zone, without jeopardizing the existing revenue collections. It also holds the promise of a more efficient tax instrument to generate additional revenues as needed with a broad base, without damaging the competitive position of the economy. An important implication of this fact is that with an appropriately designed VAT, the efficiency of collection should be equal to or eventually better than that from the current customs and sales tax at the import stage as well as the service tax. At present this is around 42% of the potential final consumption base (see Annex 1 for details).

The short-term impact on domestic revenue of introducing a VAT rests crucially on the assumed efficiency of collection together with the choice of rate.

111.1. How does a VAT operate?

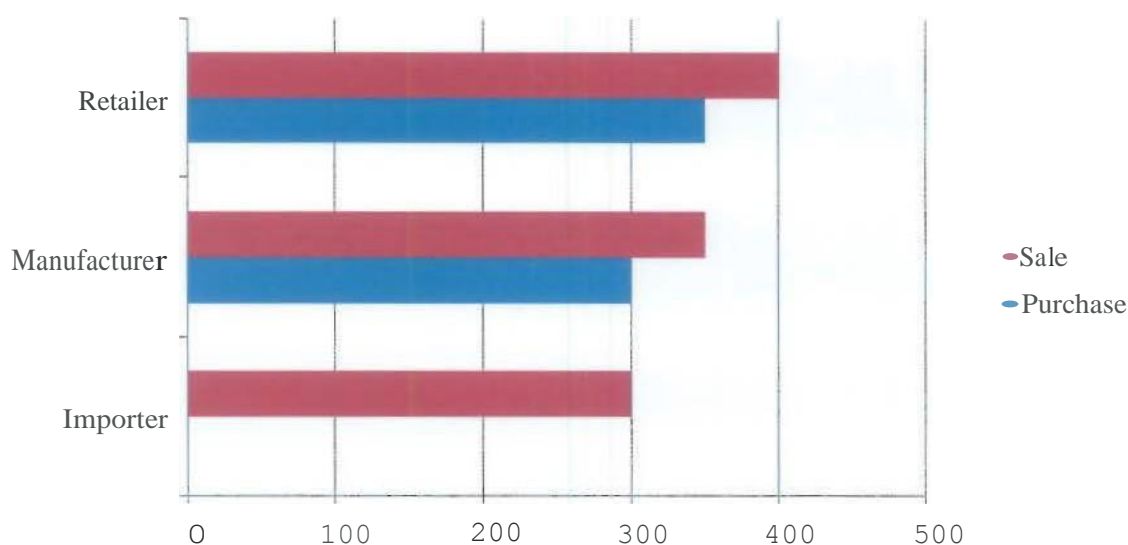
The workings of a possible VAT in Timor-Leste have been described in detail in Ahmad and Rabanal (2010), as well as subsequent reports by the IMF (IMF 2011, 2013). However, for the purposes of this paper, it is useful to recapitulate some of the main design features that we will develop in the sections to follow.

In the simple example of three sectors (imports, manufacturing, retail) in Chart 1, the value of imports is 300; this is bought by a manufacturer who processes the materials and sells at 350 to the retailer, who finally sells to a final consumer or exports at 400. Consequently, the total value added in this economy is 400, made up by 300 at the import stage, 50 at the manufacturing stage, and 50 at the retail stage. It is important to note that the value added at each stage is an approximation of wages and profits to move a good to the next stage.

A ten percent tax at the import stage (reflecting the TL context) would raise revenues of 30, which would remain embodied in the costs of production to sales to final consumers or export. This causes a distortion, and adds to the costs of exporting from this economy relative to the case where there is no tax at all, as in a

Special Economic Zone (SEZ)-and indeed is one of the main reasons for the proliferation of SEZs around the globe.

Chart 1. Simple example of Value Added, and various tax options



	Sales	Value Added	Taxon Sales	Credit for Tax on Inputs	VAT at each stage	
Retail	400	50	40	35	5	If a
Manufacturing	350	50	35	30	5	
Imports	300	300	30		30	
		400			40	

final point sales tax were to be substituted for the tax at the import stage, there would be revenues of 40. This is efficient in that there would be no distortion introduced at the intermediate stages, and would raise more revenues than the same rate of tax at the import stage. Also, if the good were exported, there would be no tax, and the entire chain is effectively in a "tax-free zone."

However, in a country like Timor-Leste with considerable informality, it is likely that it might be problematic to find and tax the final retailer, so the final point sales tax may end up generating no revenues. This is why countries at an early stage of development tend to opt for taxation at the import stage-it creates distortions, including for exports, but provides an easy "handle" for relatively secure revenue collection (Hinrichs, 1966).

A VAT, on the other hand, taxes sales at each stage but provides a credit for taxes paid on purchases. Thus some immediate results follow-including implications that tend to be overlooked:

- The total VAT potential in this country is exactly the same as that of a final point sales tax— in this case the revenue potential is 40.
- However, it is collected at each *stage*, including the 30 at the import stage that would reflect the TL starting point, and the basis for optimism about the potential efficiency of a VAT in a small island economy. *Thus*, even if the final retailer goes missing, the tax collected will be 35—or more than the tax at the import stage, and not potentially zero as with a final point sales tax.
- The tax is self-policing—it is in the interest of each member of a transactions chain to require that the seller provide full receipts as these are needed to offset her liability on sales.
- The full chain provides information on the level of transactions, as well as the wages and profits generated during the project life cycle:
 - This provides information to block cheating vis a vis the income or payroll taxes (see Ahmad and Zanola, 2015 on the Mexican context and 2013 reforms).
 - The full value-chain is particularly important when there is asymmetric information, as with PPP projects (see Ahmad, Bhattacharya, Vinella and Xiao, 2015, G24 for the Sustainable Development Conference, Addis).
 - Information on the value chain, *inter alia* through the VAT, is also seen as increasingly important in establishing true values of production in the natural resource sector, as it is typically difficult to monitor production or production shares. An implication of the audit of the value chain in the Nigerian Petroleum Sector suggested the importance of using both tax and PFM interfaces to generate information on magnitudes being produced, versus reported sales, and hence the quantities being stolen—often with the complicity of the multinationals as well as local officials (Report of the Ribadu Commission, Government of Nigeria).

111.2. Exemptions and zero-rating

Zero-rating implies that the entire amount of accumulated tax is refunded at that stage.

Exports are always zero-rated. This means that the entire amount of accumulated tax to the zero-rated/export stage is refunded. In other *words*, there is no tax in the

price of exported goods, and as stated above, the entire chain then is equivalent to that in a Duty-Free Zone. So if the final point in the chain is not a domestic consumer but results in an export, rather than depositing the VAT due in the tax administration, a refund or credit is due to the exporter. Provided that the full chain has been maintained, the export refund can be accurately determined-this is the VAT that would have been paid had the final point been the consumer.

For a VAT to work effectively for exports, the refunds have to be paid promptly, so that all the tax along the value chain is removed on exports. Notice that this would make the whole country a tax-free area for investors interested in using TL's comparative advantages to export to the region.

Domestic zero-rating, often for distributional purposes, is typically subject to abuse as agricultural products in most emerging market countries with informality are hard to verify, and are de facto exempt. In cases where there is a formal registration threshold, most producers are below the registration level and would be exempt, either legally or de facto. Providing an additional zero-rating under these circumstances opens up the possibility of fraudulent refund claims that cannot be verified, and can lead to the collapse of the VAT system.

Zero-rating of domestic transactions, e.g., say food or medicines, without a full value-chain can open up the administration to a great deal of unverifiable rent-seeking. It may be better to "exempt" sensitive non-processed food, for example rice, corn and cassava, than try to zero-rate these items in TL. The issue with medicines is more complicated, especially if there is a domestic pharmaceutical industry, in which case an exemption is problematic from an industry perspective—we discuss this issue further in the sectoral section.

An exemption under a VAT means that the firm is not taxed on its sale. But it also does not receive credit for taxes paid on inputs. And as the Australian legislation more appropriately calls it, *exempt supplies are "input taxed."* There are a number of implications of this very simple characteristic of a VAT that tend to be overlooked in many countries that seek to use this mechanism for distributional purposes or to encourage investments in various sectors. Let's assume for example, that the manufacturer is exempted in Case 1 (quite often the case in emerging markets). The firm pays no tax, but does not then have the capability of using the credits on his purchases (30).

Consequently:

- **The value chain is broken with an exemption at an intermediate stage, and the system reverts to the taxation of imports (30), as well as a final point sales tax (40),** which cannot be claimed on export. Thus the cost of doing business in the economy goes up. Of course, the revenues of 40 at the retail stage are very uncertain, as it is hard to find the retailers. Moreover, as we see in countries like Pakistan with a broken value-chain, **it is often the case that the**

system of export refunds with a chain broken by exemptions is subject to abuse, as the invoices can no longer be verified—else there is inadequate refund of accumulated taxes, and exports are consequently discriminated against.

- The broken chain means that the ability to cheat goes up, including on the income taxes and production shares. These tax-on-tax interactions are critical in our story on how to implement tax reforms in the presence of cheating and informality—and builds on new research in this area from countries like Pakistan, Indonesia and Mexico.
- If a small island economy engages in lots of exemptions for distributional purposes that break the value chain, it is likely that the main efficiency advantage will be lost, and the effectiveness of the VAT will drop sharply—e.g., towards the levels of other countries with informality-like Pakistan and (previously) Mexico—with C-efficiency ratios of around 0.25-0.27.

The most typical exemption applies to final consumers—they just purchase goods with the full VAT chain included. As pointed out earlier, this is exactly equivalent to a final point retail sales tax, but has the advantage of having been collected at each stage, from imports, to manufacturing, wholesale through to the final retailer. Even if the final retailer fails to deposit the tax collected from the customer, all that signifies is that the value added at the last stage is missed—most of the tax has already been collected. This is the big difference from the retail sales tax—if the retailer pockets the tax with the latter, the entire tax collection disappears!! Thus, this option is extremely risky in countries with considerable informality and a relatively weak tax administration.

Exemptions that break the value chain should be avoided. Typically, exemptions are given to simplify the tax treatment of various sectors, particularly finance, or to encourage investments. But, in terms of a VAT, it is better to think of the exempt sector as "input taxed", as the sector or firm does not pay tax on sales, however it does not receive credits for taxes paid on inputs either.

Exemptions along the value chain also pose a difficulty in determining the amount of the VAT refund due on exports or for agricultural zero-rating, if that option is chosen. In this case, the tax at the final stage is not the cumulative tax borne by the sector. Thus exemptions meant to encourage certain sectors may end up increasing the cost of doing business *in the whole economy*, and collectively make matters worse for exporters, while there may be clear individual gains from such exemptions.

An exemption may have different implications in sectors depending on market structure. For instance, in *highly competitive sectors like financial services* in the EU, the "simplifying" exemption just increases costs to the detriment

of the firms, the resulting incentives for inefficient vertical integration and the ability to compete in a competitive market. In other cases, VAT exemptions are given *to encourage this sector or that, and a local advantage may be created, and more and more firms compete for exemptions*. But overall cost structure of the economy and competitive position of the country deteriorates, as in the Pakistan case. The worst consequence of the demand for "exemptions" is that the information on the value chain is broken, and it becomes easier for the firms to cheat on their operations, including for the payroll and income taxes.

111.3. VAT and treatment of Investment

Under an "investment type" VAT no credit is given for the taxation of capital inputs, such as that operated for almost 12 years in China from 1994. This was largely due to revenue raising reasons, and did not stop China from growing at over 10% per annum during this period. However, a competitive exchange rate and a very high level of public investment were the offsetting criteria.

Under a more typical "consumption-type" VAT, full credit is given for the taxation of capital inputs against VAT liability on sales. This way, capital inputs are not taxed, and the VAT remains a tax on final consumption. Particularly when linked to the actual production and sales of the undertaking, this mechanism becomes a powerful tool to generate information on the production and full value added in the firm in question. This, as we shall see below, is very important in redressing the asymmetric information under PPP-contracts (Ahmad, Bhattacharya, Vinella and Xiao, 2015) and in the natural resources sector-particularly petroleum.

Often international advisors, keen to promote the interests of foreign investors, argue for the immediate and full refund of the tax paid on capital purchases, or effectively *zero-rating* the investments. This may well be in the interest of the investors, but breaches the link between input credits and output or sales generated-hence there is a loss in information and reduction in the incentives for firms to declare their transactions truthfully. *With informality the link between investment credits and outputs and sales is a critical element of measures to reduce cheating.*

111.4. Coverage and Rate Structure

In order to avoid problems with the VAT, governments should keep it simple. Most of the exemptions and multiple rates for investment and distributional purposes do not achieve the desired objectives, and because the tax becomes impossible to administer, do not generate revenues either. This is also relevant for Timor-Leste, and therefore we recommend:

- only one rate, with minimal exemptions or zero-rating, other than for exports,.

However, given the consumption and income patterns in Timor-Leste (from the latest TLSLS), we also recommend

- that non-processed food should be kept out of the VAT net. Some of this will happen anyway, as non-taxed own-consumption in rural areas, and much of the produce brought into urban areas, will be produced by small farms, below any threshold.

But the more significant non-processed items include rice, corn and cassava, and we recommend these should be exempt. This will not affect the value chain needed to "stop the cheating" and a very significant portion of the consumption of the poor will be protected from the short-run relative price changes that always occur when a new tax is introduced.

Supermarkets that sell such exempt goods as well as goods subject to the VAT would have to keep proper records for the VAT-taxed goods to claim input credits. The alternative of zero-rating sales in supermarkets, but exempting them for other retailers, more typically used by the poorer segments of the population, is to give the "richer" consumers that shop in supermarkets an advantage over the poor. This is inequitable and also opens up avenues for arbitrage and should be avoided.

If TL wishes to conduct a commodity support policy for the benefit of farmers, this needs to be done separately from the VAT discussion. The fiscal costs of the program, and also the impact on very poor people would need to be justified. It is not appropriate to "play around with the VAT" in order to achieve specific policy goals.

The potential revenue and distributional implications of a VAT are discussed in the sections that follow.

111.5. Thresholds and informality and design of administration

Often, in order to simplify the tax administration burden, while maintaining revenues, IFIs typically recommend setting a relatively high VAT registration threshold. Based on the information available at the time that there were 1700 firms, and much of the value-added was generated by some 200 firms with annual turnover above \$200,000, Ahmad and Rabanal, ADB (2010) agreed with the revenue administration that the registration threshold should be set around the \$200,000 level. This was endorsed by IMF (2011) and IMF (2013).

However, the above assessment missed the fact that there is a very high level of informality in Timor-Leste, and the tax administration does not know about the true universe of firms in the country. Data from the latest Business Activity Survey (BAS) 2013 that is now available suggests that there are probably around 6,500 firms, and that the proportions implicit in the \$200,000 recommendation likely imply that the relevant threshold should be closer to \$100,000. But even this may be too high to "stop the cheating." For instance, in Barbados, a similar island economy with informality, the registration threshold is \$30,000.

The simplicity argument underlies the IFI recommendation of a high enough threshold to limit the number of taxpayers that need to file returns. The argument rested on the seminal discussion by Keen and Mintz concerning the "incentives to reconstitute firms" below the limit in relation to the relative ability of the tax administration to manage the system. A relatively high VAT threshold was considered to be critical at the outset of the modernization of a tax administration system, to limit the burden on the tax administration, and to operate a system of self-assessment that relies on accurate information *flows*, together with audit and associated penalties for non-compliance.

Minimizing the administrative burden was also the basis for the recommendation of a \$200,000 gross turnover threshold for TL and was accepted by Ahmad and Rabanal (2010), and IMF (2011 and 2013). The tax administration's estimate at that time was that roughly 200 businesses would fall into the net, but would generate much of the revenues, along with the fact that the bulk would still be collected at the import stage. This argument seemed reasonable at the time, in light of Singapore increasing its threshold to above \$600,000 of gross turnover and the IMF endorsement of a threshold of \$1 m for the GCC VAT. However, in both Singapore and the GCC, there is very little informality and firms above the specified limit generate almost 90% of value added, and the rest are small traders that effectively operate as final consumers anyway.

The situation changes if there is informality and incomplete information on the value chain, with associated incentives to cheat, *including for the largest taxpayers*. With the recent revelations about Volkswagen, it is clear that even "reputable" multilateral corporations have incentives to cheat if they believe that they can get away with it. With incomplete information it is no longer necessary to reconstitute firms in order to evade taxes. It is much simpler to "hide" transactions by dealing with firms and suppliers below the threshold that are not visible to the tax administration. Thus, both a high threshold and other sundry exemptions facilitate "cheating" by hiding quantities produced, workers employed (e.g., using short-term contracts or casual labor, that also saves on payroll taxes and benefits) and also profits, that reduces direct taxes due.

A consequence of this pattern of "informality" is lower productivity and reduced competitiveness, as argued for Mexico by Anton, Hernandez and Levy (2015 and forthcoming). It is useful to keep in mind that in Mexico the legal

threshold for the VAT is zero, but the effective threshold was the formal requirement for bookkeeping and reporting set at M\$2.5m (roughly US \$250,000), administered by the Federal State Administration of Taxation (SAT). Establishments below this annual turnover were under the jurisdiction of the small taxpayer regime (REPECOS) administered by the States, and were not subject to SAT audit. SAT estimated that there was over 90% evasion in the REPECOS regime, so that effectively the entire sector was out of the tax net. The 2013 reforms changed the effective threshold to M\$100,000 (US \$ 10,000), below which there was no registration or filing requirement. However, firms between M\$100,000 and M\$2.5 m were brought back under SAT jurisdiction and audit, but were provided with a simple cash-flow based software for the compulsory issuance of electronic receipts and invoices, and with a simplified quarterly reporting requirement.

The choice of system used to determine the amount of the VAT due depends on the capacity of the Tax Administration. A system relying on matching of invoices would become the bedrock of the VAT and also the basis for stopping the cheating in all other taxes and payments of benefits. As is evident, a system based on matching all invoices will have somewhat different IT requirements than one that just adds up the monthly or quarterly returns by firms.

The options would need to be assessed by the tax administration mission, and much would depend on the capabilities of the administration and the ease of implementing a legal framework.

As is clear, decisions on the alternative models for administration will have implications for the design and implementation of the Tax Identifier Number (TIN), and the need for reregistration that is typically recommended in conjunction with such a major reform.

The preferred accounting and reporting arrangement for a VAT would be to require accruals based reporting for the larger firms (e.g., above \$100,000 annual turnover). This facilitates the matching of the VAT information with that of the income tax.

However, for the smaller firms, an integrated system would be based on a simplified cash-flow accounting framework, say, between \$30,000 to \$100,000 annual turnover. A simple electronic system of accounting could be provided to these tax-payers, along the lines of the Mexican Integrated Federal Regime (RIF) implemented in 2014.

The tax administration mission to follow will address these central issues.

111.6. Relative Price Changes or Inflationary Effects

A very common mistake is to confuse the phenomenon of inflation with the relative price changes that occur with any tax reforms.

Inflation is a monetary phenomenon, and much depends on what happens to aggregate demand as a result of the tax reforms. For instance, an accommodative monetary stance together with market imperfections allowed retailers to increase prices despite a tax cut in TL in 2008. Designing a macroeconomic model with sticky expectations is beyond the scope of the present paper but should clearly be undertaken by the advisory teams in the Ministry of Finance in consultation with the Central Bank.

However, there is no doubt that relative price changes will result from a VAT. In the TL case, the stated intent of the government has been to replace the distorting customs duties and sales taxes levied at the import stage and the service tax by a VAT, and we focus on two possible scenarios with different price implications.

In the first scenario, if the 2.5% customs duty and 2.5% sales tax on imports are replaced by a 5% VAT, there is in principle no significant price change on imports and tradeables⁴, and therefore for the majority of goods consumed. Most non-tradeables (such as services that can only be locally generated) are consumed mainly by the richer segments of the population. These amount to a small element of value added at present. In any case, the consumption data from the 2015 TLSLS suggests that much of the consumption of such services is by the higher income brackets.

In the second scenario, if the taxes at the import stage are replaced by a 10% VAT, the relative price changes will no doubt be stronger than in the previous case. Again, the relative price changes drive the effects on: 1. households in different circumstances; 2. incentives for firms and producers, and; 3. net revenue effects after closing the avenues to cheat and evade tax.

Modeling the effects of replacing the existing service tax by VAT is more tricky. One would need an input-output table, broken down into non-tradeable and tradeable (Armington matrix) transactions at a sufficiently disaggregated level (e.g., with SO+ sectors to be able to evaluate the effects of relative price changes in various sectors). Then the components of the existing service tax would need to be examined as well as the possibility of a generalized VAT on services. The data for a precise evaluation for this is not available, although a short-cut using national accounts data can be used for the estimation of the revenue-effects (as we explain in one of the sections to follow).

⁴ Tradeables are goods that are exported or which are imported or subject to competition from exports, so that the domestic price changes are bound by the international prices within the margins associated with trade

Relative price changes have implications in three main areas:

- establishing short-run gainers and *losers*, and therefore distributional changes;
- **revenue changes, and;**
- the efficiency and incentive effects leading to a different growth trajectory.

Estimating these effects requires a full-fledged research agenda along the lines of the optimal tax approach outlined in Ahmad and Stern (*Theory and Practice of Tax Reforms in Developing Countries*, Cambridge University Press 1991). In the following sections we provide some rough approximations regarding the potential revenue and distributional implications of VAT.

IV. Revenue potential of a VAT in Timor-Leste

The precise revenue effects of the tax-induced price changes would have to be modeled carefully, including an assessment of gainers and losers. It is not sufficient to take the current spending levels and apply the price changes to get the new distribution and revenue-yield. For a start, households adjust spending in response to price changes, given budget constraints. Thus the net revenue effects would be a function of price-induced consumption changes, for which both own and cross-price elasticities are needed (see Ahmad and Stern, 1991 for methodological details). On the other hand there should be efficiency-gains as a result of the shift to VAT, as well as increased exports, all of which would generate growth and hence also higher revenues with a more buoyant tax base.

Significant data inputs are needed to work through the direct and indirect effects of relative price changes on production and consumption (underlying both the optimal tax approach illustrated in Ahmad and Stern, 1991, or even suitably calibrated CGE model). However, **a proxy for the revenue potential for a VAT can be derived from the National Accounts Database.**

Recall that a VAT is in effect a tax on final consumption, as explained in Chart 1. We can use National Accounts data to derive final consumption, and then assume a level of efficiency of collection. With a specified level of tax, we can derive the potential tax collections. This is the typical approach taken by the international agencies (see e.g., IMF (2011) for earlier estimates for Timor-Leste).^s

⁵ The main approach used to establish the base for the VAT in an economy involves the use of Input-Output (IO) tables. This permits the identification of the intra- and inter-sectoral transactions whereby value is added to the economy. Because all flows within and between sectors can be identified, any exemptions and the resulting cascading effects can be easily accounted for, so that the estimate of Value Added subject to tax can be accurately approximated. However, no IO table exists for Timor.

More specifically, we start with nominal (non-oil) GDP for 2013, which is in principle the sum of all the value added in the economy. From this we subtract the value of exports X, tax on which is fully refunded under a VAT, and add the value of imports M, which are fully taxed under the VAT. The total value of Gross Domestic Capital Formation (or investment I) with the exception of that in residential dwellings is also subtracted from GDP, as the tax on all investment activity is fully credited under a VAT.⁶ Value added in the agriculture sector is also subtracted, as this sector is normally exempt and in the case of Timor-Leste, with most agriculture being of the subsistence type, cannot be feasibly brought under the tax net. Government expenditure on wages and salaries is not subject to VAT and therefore must be subtracted as well. Finally, we have assumed that small businesses with turnover between \$30,000 to \$100,000 dollars will be subject to the small taxpayer regime to stop the cheating among the large taxpayers, but will not in itself generate much revenue. Hence, for the purposes of the revenue estimates, we just exclude the value added below a turnover of \$100,000, using estimates based on the 2013 Business Survey.

Given our suggested policy design, and the integration of small taxpayers into the regime, while making business to business sales, we do not expect there to be any cascading in the system. Thus, we would not make the adjustments typically made by the IFIs in the context of cascading due to exempt sales IMF (2011). The exemption for non-processed food does not affect the value chain or lead to cascading. Indeed, the current cascading due to the focus of taxation/duties at the import stage would be removed.

The final adjustment relates to the extent of leakage due to inefficiencies in the collections process. In the case of Timor-Leste it was assumed that only 42% of the value added that would otherwise be subject to VAT is captured by the tax administration. This rough estimate is the result of applying the 2.5% + 2.5% import duty + sales tax (roughly 5%) to the total value of non-oil imports for 2013 to arrive at the theoretical maximum revenue for that year, and then dividing the actual revenue collected in the year by the theoretical maximum.

The calculations above yield our estimate for the base of a VAT, using actual data for 2013. We then perform similar exercises for the years 2014-2020 using projections for some elements of the above calculations provided by the Ministry of Finance (National Directorate for Economic Policy, (NDEP)). The elements for which projections are available are Investment, Imports and Exports, and Government Salaries and Wages. All other elements are assumed constant as a share of projected GDP, with the exception of value added by firms below the threshold. Here we assume that firms above the threshold will experience stronger growth and so that the value added of firms below the threshold will fall as a percentage of GDP.

⁶ Investment activity is different from consumption, which is what a VAT ultimately aims to capture. However, VAT is applied on the first sales of residential dwellings under the assumption that the sale value is equal to the Net Present Value of the flow of services delivered throughout the lifetime of the dwelling.

Our main simulations in this section are based on the estimates provided by NDEP. These are based on a significant shift towards investment in the three-year budgetary cycle (2015-18). This would be highly desirable, even if it limits the potential VAT revenues if there is a compression of consumption as would be required in any robust DSA exercise (see Ahmad and Basu, 2010).

However, in a small open economy, a significant shift from consumption towards investment can only come about through three policy interventions:

- The most typical is an adjustment in the exchange rate, that is often used to constrain domestic consumption;
- Quantitative restrictions on consumption and redirecting public spending from wages and benefits to investment-this is typically quite difficult in an open economy context; or
- "Fiscal devaluation" that involves moving from a set of taxes that add to the cost of doing business to the VAT-removing distortions against exports. This is what Portugal and countries in Latin America have been trying to achieve as a response to the fiscal crisis. This is our maintained hypothesis, to meet the MOF/MECAE objective of using the VAT to increase incentives for investment and growth in TL.

We take the NDEP estimates as the baseline, in order to generate consistency for the Ministry of Finance.

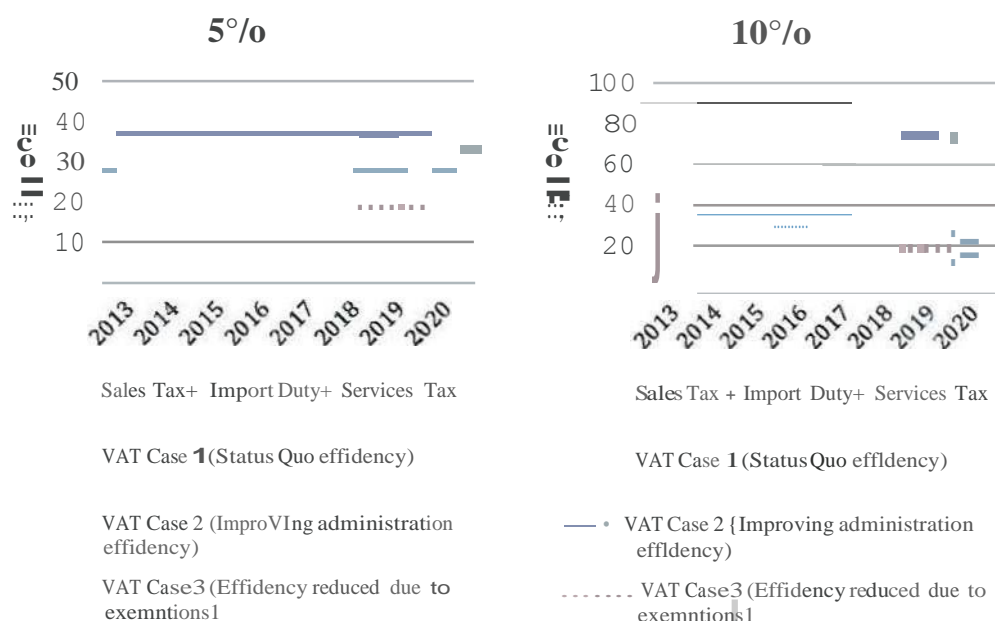
However, we also carried out a sensitivity analysis with a number of alternate assumptions-these are available on request. One reported in Annex 1 assumes that the current division between consumption and investment is maintained until 2020-this generates significantly higher VAT revenues (almost a 50% difference).

For Scenario 1, where a 5% VAT is projected to replace the 2.5% import duty, the 2.5% sales tax, and the 5% service tax, constant efficiency of 42% would leave domestic revenues more or less unchanged in the short to medium-term (at around \$210m in 2020, of which roughly \$33.5m would be on account of VAT roughly replacing the sales *tax*, import duties and the service tax). This is shown in Figure 1.

An enhancement in efficiency to say 50% would take VAT revenues up by an additional \$6.5m, but this would clearly not be enough to get close to the \$345m target set by the Fiscal Reforms Commission.

A VAT with lots of exemptions and domestic zero ratings would actually lose revenues relative to the import duty/sales tax scenario. This would hardly be worth the additional effort needed on the tax administration side.

Figure 1. Scenarios for VAT revenues



With the MOF assumptions of increasing share of investment relative to consumption, a 10% VAT would generate around \$67m to \$80m by 2020 with current or increased efficiency (see Table 4). If the existing consumption patterns were maintained, the collections by 2020 would potentially be considerably higher, or between \$63m to \$126m for the various assumptions.

It is clear that a VAT of 10% would permit getting closer to the Fiscal Reforms Commission domestic revenue collection goal, although the projections are very sensitive to the assumptions about investment and consumption.

It is normally recommended to start with a low rate VAT at the outset while the tax administration is being brought up to scratch; however, the current situation dictates a somewhat different approach. There is a pressing need to increase domestic revenue in the medium term, but revenue-raising options in the short-to-medium term are limited. A final point sales tax at the retail stage would be impossible to collect in a country with extensive informality and a weak administration. Increasing the current import stage sales tax would re-create the distortive pre-2008 structure of taxation, and also goes counter to the thrust of the current reforms designed to make TL a more attractive place to do business. It would also not make much political sense to repeal the 2008 legislation, especially when some of the changes were in the right direction.⁷

⁷ As recommended in IMF 2013, the income tax changes in the 2008 legislation may warrant revision, as the single rate structure makes little sense given both the revenue as well as income distribution considerations in a country like TL. However, this issue is outside the scope of the current paper.

Table 4. VAT projections (various assumptions)

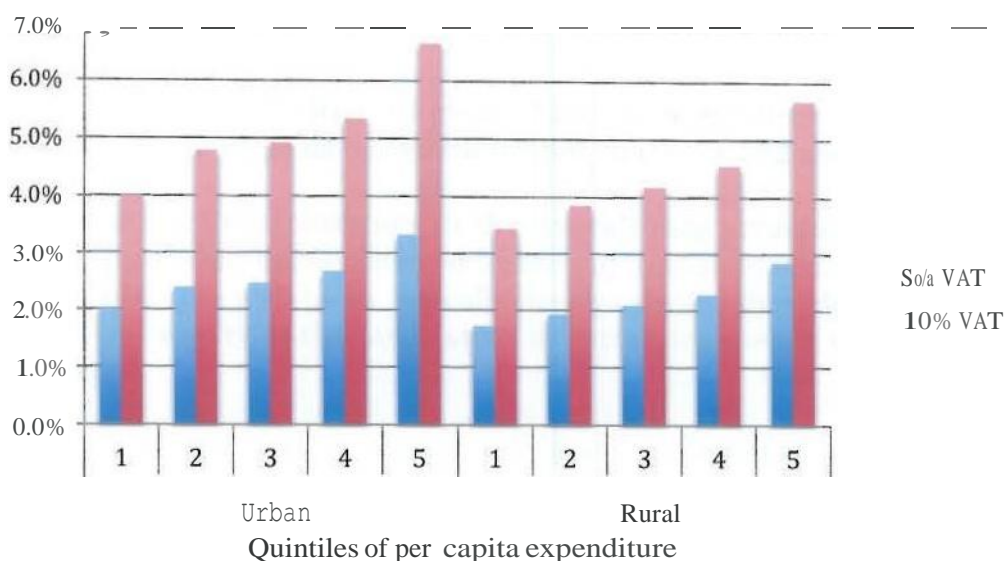
VAT Rate 5%

	2013	2014	2015	2016	2017	2018	2019	2020
Sales Tax+ Import Duty+ Services Tax	30.06	31.12	35.30	28.33	29.47	30.65	31.87	33.15
VAT Case 1 (Status Quo efficiency)	30.43	30.86	35.68	28.93	30.15	30.79	31.51	33.53
VAT Case 2 (Improving administration efficiency)	36.23	36.74	42.47	34.44	35.90	36.65	37.51	39.92
VAT Case 3 (Efficiency reduced due to exemptions)	18.11	18.37	21.24	17.22	17.95	18.33	18.75	19.96

VAT Rate 10%

	2013	2014	2015	2016	2017	2018	2019	2020
Sales Tax+ Import Duty+ Services Tax	30.06	31.12	35.30	28.33	29.47	30.65	31.87	33.15
VAT Case 1 (Status Quo efficiency)	60.86	61.72	71.35	57.85	60.31	61.58	63.01	67.06
VAT Case 2 (Improving administration efficiency)	72.46	73.48	84.95	68.87	71.79	73.31	75.01	79.83
VAT Case 3 (Efficiency reduced due to exemptions)	36.23	36.74	42.47	34.44	35.90	36.65	37.51	39.92

Figure 2. Approximated Compensating Variation for the VAT
as % of total household expenditure.



International agencies and bilateral donors often stress the importance of "compensating" poor households that are affected by relative price changes with transfers. An example of this is the *ProgresajOportunidades* Conditional Cash Transfers Program. It is worth noting, however, that despite the operation of *Oportunidades* in Mexico since the late 1990s, there was no reduction in poverty overall in the country, or in the poorest state, Chiapas, and the program was abolished in 2014. It is also interesting to note that the introduction of VAT in China in 1993/4 (at a 16% rate) was not accompanied by increased inter-personal transfers. The additional funds were used to finance investments for long-term growth and employment generation, and led to the largest reduction in poverty in history (700 million people taken out of poverty in the last two decades out of 750 millions worldwide during this period).

In the case of Timor-Leste there may not be a need for any compensatory measures along with VAT change, since the impact on the poor can be minimized, as we discuss above. The final combination of customs/sales taxes and excises to be replaced at the time VAT is introduced should form the reference point for any assessment of gainers and losers.

It is however crucial to ensure that the use of the additional revenue generated is decided with distributional considerations in mind. In the long-term, increased resources for public services greatly relied on by the poor, such as sanitation, health, and education, resulting from the increase in domestic revenue can potentially improve the overall progressivity of the system. Other worthwhile uses with a positive, but less immediate distributional impact include sustainable investment, growth and job creation.

magnitude of production and exports, as well as the components of value added (wages and profits) that are useful to stop cheating with the direct taxes.

The case of Oecussi is interesting, as it is an enclave in Indonesia that does not share borders with TL. In this case, and in keeping with the Oecussi basic law, revenues from a VAT implemented in Oecussi could remain in the exclave, as it is unlikely that there will be many transactions with the mainland, or leakages affecting producers on the mainland. If that option is adopted, the tax administration would "ring fence" the Oecussi VAT, and the law would have to specify how firms that operate in both Oecussi and the mainland would report their operations and make VAT payments. The PFM aspects could be specified in a separate note-typically this will involve correspondent accounts within a Timor-Leste treasury single account (TSA), *unless* there is a separate TSA for Oecussi. Note that it may be more difficult to ring-fence Atauro special zone that is close to Dili. In all cases, the VAT would apply, and be administered by the TL Tax Administration. The sharing issues would need to be addressed separately (see e.g., the discussion in Ahmad and Searle, 2006).

VI.2. The Petroleum sector/ Large Infrastructure Projects

Large infrastructure projects (ports, railways, major roads) and the investments needed in the petroleum sector share a common characteristic that there are large up-front capital outlays that attract credits (in the case of domestic sales) or refunds (in the case of exports) that may not occur until several years after the investments have taken place. These credits or refunds are an integral part of a consumption type VAT (although irrelevant in the context of an investment-type VAT, such as that adopted initially by China in 1994 for revenue generating purposes, but which did not have a negative impact on either investment or growth for a variety of reasons).

The typical concern with applying VAT on investment is that there may not be sufficient budgetary resources available to make the refunds at the time these come due. We address these issues sequentially for the petroleum sector and PPPs. Special issues apply in T-L regarding the petroleum sector. And PPPs, if properly designed and implemented, could play a major role in the investment and growth strategy in the future.

VI.3. Petroleum Sector issues-should a VAT apply?

VI.3.1 Current situation

The BU project has a VAT governed by Indonesian law. However, a number of serious issues arise as far as T-L is concerned:

- Without a full recording of the VAT chain by the Timorese authorities, the capitalization claimed by the companies may be overstated to minimize the income tax liabilities due to Timor-Leste.
- If VAT on purchases by the T-L petroleum sector is collected by another jurisdiction and the costs capitalized against T-L income taxes, this effectively represents a transfer from T-L to the other concerned jurisdiction.
- The above would be additional to the questionable transfers to the concerned company that might overstate its claims.

VI.3.2 Options:

- a. Keep the petroleum sector out of T-L VAT jurisdiction.

Under this arrangement, the firms engaged in petroleum-based activities would not be subject to VAT payments on sales or purchases, akin to operations within a Tax-Free Zone. However, this would require that Indonesia and Australia zero-rate sales of inputs for the T-L petroleum sector.

If the external inputs (from Indonesia and Australia in particular) are not zero-rated, then the situation reverts to the current arrangement and the advantages of a tax-free jurisdiction are lost. Note that there is no incentive for Australia to zero-rate intermediate inputs as a full VAT applies to the Australian petroleum sector, and exports are in any case zero-rated.

- b. Exempt the petroleum sector

This option is perhaps the worst alternative for the T-L petroleum sector. It just means that there is no VAT on production or exports, but all the VAT on inputs, whether domestic or imported, remains embodied in the cost of the production, effectively generating a competitive disadvantage for the T-L producers, vis à vis say sales from the Australian part of the concession.

- c. Apply the VAT fully to the T-L petroleum sector

The main reasons for the full application of the VAT to the petroleum sector are two-fold:

- The most important is to remove distortions and reduce the cost of doing business-so that on export all cumulative VAT is removed. In practice, there will be no VAT revenue generated on exports, and much of the VAT revenues will come from domestic sales. However, a single system will facilitate and simplify reporting as well as VAT refunds when the exports take place.
- The second and increasingly important reason, particularly in the presence of base erosion and cheating, is that the VAT has potential to assist in tracking the level of transactions based on linking inputs and outputs.

It needs to be stressed that not much revenue will be generated from a VAT on the petroleum sector itself, but it is needed to stem base erosion and cheating vis à vis production-sharing or declaration of profits.

There are a number of options with respect to the operation of a VAT in the petroleum sector, particularly with respect to the treatment of capital inputs:

- One option that is typically suggested is to zero-rate the capital input purchases-providing an immediate credit. This is relatively straightforward and simple in administrative terms. However, it loses the leverage that comes with linking credits and refunds to outputs and exports. In other words, it loses the informational advantages that are generated by a full operation of the VAT.
- An intermediate option is to refund the VAT on capital purchases in installments. While this may be attractive from a budgetary perspective, it really is inferior to the first option in efficiency terms (there are costs for the producers), and does not generate any information advantages, as there is no link with the level of production, or exports.
- A final option is to run the VAT as a normal exercise-linking input credits or refunds to production and/or exports. A constraint in this case in some developing countries is that significant revenues are generated with the purchase of equipment up-front, but the refunds may not come due until some years later as the production and exports begin to flow. This is a PFM issue, and as we discuss in the next sub-section, can be addressed with the creation of a specific interest bearing account, e.g., in the Central Bank.

Note that the VAT on inputs to the petroleum sector would not normally accrue to the Petroleum Fund, as it is not generated by the sale of petroleum, but normal inputs.

It is also important to be clear that while this additional information is useful in stopping the cheating, it is by no means sufficient, and may need to be

supplemented by tight monitoring of the flow of funds, and a better interface between the government's GFMIS and the petroleum company operating systems.

The Norwegian petroleum sector is often treated as an example of "best practice" and clean governance. The Norwegian VAT treatment is a combination of options 1 and 3 above—the difference being that the full VAT operates within the territorial boundaries, and capital inputs are zero-rated outside territorial waters (see Box 1 Deloitte's: Norway Oil and Gas Survey).

Box 1. Norway-VAT treatment of the Petroleum Sector

Norway operates a traditional VAT system. The sales of goods and services are normally subject to VAT at a rate of 25%.

However, goods and services supplied outside a 12 nautical mile zone of the Norwegian mainland are not subject to VAT.

Moreover, the supply of goods and services outside the 12 nautical mile zone in connection with the exploration and production activities on the NCS are normally zero rated.

Sale of crude oil and gas made by licensees will in practice always be zero rated (sales within Norway are subject to the ordinary rate of 25%).

Import of goods into Norway's customs zone are generally subject to import VAT. The customs zone consists of the mainland and 12 nautical miles outside the mainland. Therefore goods that are provided to e.g. installations outside the

Norwegian customs zone are not subject to the import VAT.

If goods are placed in a customs warehouse, in transit or temporarily imported into Norway, import VAT may also be avoided.

Deloitte. *Oil and gas taxation on Norway*. 2014.

V/.3.3 *Petroleum sector interface with PFM issues*

The budget process issues are important, and need to be addressed in conjunction with any large investments, including but not exclusively in the petroleum sector. As we have argued above, an investment type VAT that denies credits or refunds on capital purchases (effectively exempting investment), is not

suitable for TL with a small open economy and its use of a "strong" dollar as currency.

Providing refunds prorated over time is only a budget-smoothing mechanism, and not a very efficient one at that. It also breaks the link with actual outputs and exports, and loses important information and incentive benefits that the VAT potentially could provide. It does not get around the need for proper budget planning over the medium-term, where the liabilities associated with current contracts are honored in the future budgets (as with pensions), even if the system of annual budgeting is retained in the future.

Much of the VAT revenues generated from the petroleum sector would come from the regular purchases of equipment from suppliers that would be within the normal VAT net-either at the import stage or in case of domestic production, within the country-and revenues would accrue to the Treasury and not the Petroleum Fund.

The VAT likely to be refunded in the future as exports are generated could be deposited into an investment account. As suggested by the Central Bank Governor, this could be managed by the Central Bank that would earn market rates of interest.

Together with a system of active cash management and forward planning, e.g., in a Cash Management Unit typically needed to operate a Treasury Single Account, there should be no need to ask Parliament to hold larger (non-interest-bearing) balances in the TSA than needed for the regular operations of the government. Indeed, TSA principles suggest the minimization of such balances to optimize the overall asset and liability management of the government.

VI.4. PPPs

It is common to utilize PPPs for large investment projects, but the typical problem is that there is asymmetric information on how the private partner manages his operations and the degree of effort exerted. As with the petroleum sector, the VAT is one of the principal ways to generate information on the level of transactions in the relevant sector, even if the goods or services are targeted towards exports. Several considerations apply:

- It is not appropriate to exempt PPPs from the VAT. This would subject the PPPs to "input taxation", and would cause serious problems in terms of additional costs of doing business in TL.
- Providing input credits against future flows of returns from the PPP investments would effectively remove the taxation from investment during the production cycle.

- **Zero-rating at an intermediate stage is tantamount to providing an additional subsidy to the operator of the PPP** (in the example of Chart 1, if the manufacturer operates a PPP, this formulation would give a 300 subsidy to the PPP operator, without affecting the final price of the good). This may well be a policy decision of the government, but has to be linked to alternative uses of government funds, such as **financing mother and child clinics**.

There are transitional issues with PPPs that are contracted before the introduction of a VAT, and which would have to pay the regular customs and sales taxes at the import stage.

- Presumably the bids are based on the assumption that these taxes would remain in situ. Consequently, when a VAT is introduced, there would be a **reduction** in the tax burdens of the PPP operators relative to the agreed price/contribution from the State-and the contractual maximum price would not in principle be affected.
- Alternatively, if the imports are in the duty free zone, then the argument above applies and the VAT will not affect investments or transactions destined for export.

The VAT plays a role in establishing hard to track activity levels in PPPs. It is particularly important to ensure that the build-up of public liabilities that are generated during a PPP are recorded in the government balance sheet (in accordance with IPSA\$ 32) with appropriate provisioning. This involves the PFM system, and should be on the radar of the MOF in the Fiscal Reform Modernization. Typically, governments have limited ability to monitor the effective uses of inputs and effort by private contractors, even in EU countries (see Minervini and Vinella, 2016). Again, the VAT provides information on activity levels that provides additional insights on what otherwise is a "black box" as private partners have incentives to hide transactions.

Any pricing issues and implicit subsidies, or direct subsidies, should be clearly reported and recorded in the budget documents-else the costs of the PPPs may not otherwise be fully understood. This was a huge component of the crisis in Europe (see Ahmad, Bordingon and Brosio, 2016). See also Ahmad, Bhattacharya, Vinella and Xiao, 2015, (G24/GGGI background paper for the Sustainable Development Summit) for the treatment of the private sector for public investments, including the role of the VAT in providing information that might not otherwise be available. The main point is that the VAT can help identify the volumes of transactions and "effort" by the private partner that are typically hard to identify even in OECD countries with good PFM arrangements.

In principle, even with public utilities and sectors such as electricity, where there might be a subsidy or administered price, this should operate parallel to the VAT. Exempting such sectors or utilities from the VAT would add to their costs.

We recommend that:

- As with the free trade zones, it is important that the oil and gas sector should be within the scope of the VAT. This is important to establish the magnitude of transactions in the petroleum sector. However, the budget systems needs to be capable of recognizing the buildup of potential liabilities (VAT on inputs that need to be repaid in future years as exports expand apace), and this may be handled through the investment accounts managed by the Central Bank.
- Subsidies and administered prices on energy products, for example, should be brought into the VAT and adjustments made to the subsidies or administered prices as necessary.
- Existing production-sharing contracts need to be reviewed to determine if transitional arrangements might be needed.
- PPPs should not be exempt or zero-rated, but subject to the regular VAT regime.

VI.5. Government, non-profit and educational sectors

The introduction of the VAT also provides the opportunity for the TL government to review policies with respect to education and health care in particular-in keeping with the sustainable development goals. These sectors have been critical in the successful transformation in East Asia, and the Latin American countries such as Mexico and Chile are trying hard to catch up, given their dismal performance on the Pisa scales. A critical aspect of the reforms in Chile and Mexico is to use additional taxes to provide free public education to the relevant cohorts. Under these circumstances, it becomes important to bring the education and health care sectors into the VAT net-especially for public hospitals that are very investment intensive-so that costs can be passed on. With the public schools, for example, the tax treatment would provide an effective zero-rating (with zero-fees) so that the costs of operation are reduced. Symmetric treatment of private schools would tax the rich pupils who can afford to pay high fees-thus improving the equity of the overall system.

Taxing private schools but zero-rating public schools would create a distortion that would be difficult to manage. And zero-rating all schools becomes regressive, as the state effectively treats a subsidy of \$1 to the poorest household as equivalent in welfare as a similar subsidy to the progeny of millionaires. Zero-rating tends to be expensive and open to abuse.

The alternative is to exempt education-although this will lead to input taxation and increased costs.

As we suggest throughout this paper, the set of policy instruments has to be expanded to avoid introducing impossible distributional considerations in the VAT. This is a crucial lesson from international experience-and needed to make the VAT workable. It has to be part of a package.

There is a set of clear options (see Table 6 below) for the health and education sectors given political considerations. It is important to note that options other than (A) below require the VAT laws to define precisely what *supplies* made by entities in the sector are to receive the special treatment. The laws cannot simply say that, for example all "schools" are to be exempted because different types of school may make a range of different supplies, some of which should not be exempted. Many entities may make both supplies that receive the special treatment and supplies that do not. For example, a language school may offer paid translation services to the public.

- The ideal situation would be to subject the education sector to the VAT (case A)-this would provide subsidies to schools that do not charge fees, and tax those that do. This could be accompanied by direct support to poor students (caseD, which subsumes A).
- If the above is not politically feasible, then the simplest would be to exempt the sector, Case B, keeping in mind the need to define what is an educational establishment (vis a vis a bookshop say), but allow schools to opt to come into the tax net to offset the costs of taxed inputs.
- Case C is much too complex and subject to abuse. This is not recommended.

Taxing medicines is more complicated, especially if there is a domestic pharmaceutical industry. In this case, an exemption disadvantages local producers, that have to bear the costs of taxed inputs, whereas imported medicines would bear no taxation (assuming they come from countries that zero-rate exports).

Table 6. Options for the treatment of public sector activities

Option for VAT approach	Key Implications
<p>A. Fully in VAT system</p> <p>Entities charge VAT on all supplies that they make that customers pay for, and they can claim back any VAT they have paid on their inputs.</p>	<ul style="list-style-type: none"> a) Private schools and hospitals are treated the same as business; they charge VAT on their fees. The Government effectively collects VAT from their customers. b) Public schools and hospitals are in the system but VAT is not collected because the fees are zero. c) VAT laws are not made any more complex. d) Tax administration compliance costs do not increase.
<p>B. Specified sector supplies are exempt from VAT</p> <p>No charging of VAT and no right to claim back VAT on inputs.</p>	<ul style="list-style-type: none"> a) Entities in the sector are effectively taxed on their supplies that are specified as exempt because they cannot claim back VAT paid on inputs. This tax will flow through to customers in prices. Tax is collected indirectly by government. b) VAT laws become more complex: they will need to define the particular supplies that are to be exempted. c) Tax administration compliance costs increase to check that entities are applying the exemption in line with the law. d) Entity compliance costs will be nil if they only make exempt supplies; but they could increase as they may need to be in the system for supplies that are not exempt.

C. Zero-rated

Same as for A but the rate of VAT charged is changed to zero on specified supplies.

- a) Entities do not charge VAT on their supplies that are zero-rated; no tax is collected on the zero-rated supplies. Entities claim back VAT paid on all the inputs. They constantly receive refunds. No tax is collected on zero-rated supplies.
- b) VAT laws become more complex: they will need to define the particular supplies that are to be zero-rated.
- c) Tax administration compliance costs increase to check that entities are zero-rating only the right supplies.
- d) Entity compliance costs are the same as for business but will be higher if the entity is making both zero-rated and standard rate supplies.

D. Fully in VAT (case A.), but with compensation for disadvantaged people

- a) Governments can compensate people it thinks are disadvantaged by tax being collected on supplies in the sector. VAT rebate systems based on receipts (similar to tourist rebate schemes) can operate.
- b) Laws become more complex to define who is to be compensated unless an approach of increases under an existing compensation scheme can be used.

Yet taxing medicines may be difficult from a political economy perspective. Given that there is no domestic pharmaceutical industry, and most medicines are imported, it may be simplest to **"exempt" (largely imported) medicines in the first instance and then review the situation some years hence if a domestic industry develops.**

The temptation to subject brand names to the VAT and exempt generic drugs should be avoided. Typically, the differential between generic drugs and branded medicines is enormous, and regulation has a greater role to play in this than the VAT. While political economy considerations are clearly important and application of the VAT to medicines should not be used as an excuse to abort the VAT, it is important that the tax policy design is kept as simple as possible.

VI.6. Financial services

The approach adopted in the EU countries, that were among the first to move to the VAT, was to exempt the financial services sector. This seemed to be the easiest approach to adopt at the time, and was also formalized in the common market requirements. However, it caused severe distortions and there have been several attempts to solve the problems. The exemption has put the EU financial sector at a disadvantage vis à vis those jurisdictions that do not have a VAT (EU), or where the VAT is zero-rated on international transactions. As mentioned above, the critical issue is to ensure greater efficiency in the production structure, taking full advantage of what the VAT can offer.

But an important political economy lesson emerges from the EU failures in reforming the VAT treatment of financial services— even if most governments agree that a policy should be changed, there are always gainers and losers, and the latter can generally block any reforms if only one instrument is used. Again, as in the Mexican case, this points the need to generally take a "package approach" to major reforms.

Financial services include a large variety of services, including bank deposits and loans, life insurance, property and casualty insurance, services of agents and brokers for financial transactions, and financial asset management. In some countries, *transactions in gold, silver and other precious metals are also treated as part of the financial sector*, given that these metals are often bought as investments, and not for consumption.

The principal reason for the financial sector exemption from the VAT is ease of administration. This is because the charge for the services provided by financial intermediaries (such as banks and insurance companies) is often not explicit, but is hidden in interest, dividends, annuity payments, or such other financial flows from the transactions. For example, banks provide the service of operating and maintaining deposit accounts for their depositors, for which they charge no explicit fee. The depositors *do*, however, pay an implicit fee, which is the difference between the pure

interest rate (i.e., the interest rate which could otherwise be earned in the market without any banking services) and the interest actually received by them from the bank on the deposit balance. The fee is the interest foregone. It would be straightforward to levy tax on this implicit fee if the reference 'pure rate' were easily observable-but it is not. In the case of loans, the fee would be the interest charged by the bank in excess of the pure interest rate. The spread between borrowing and lending rates, could be measured, and taken as measuring the *total* value added by the intermediary. But in order for the crediting mechanism to work properly, it is necessary to go further and *allocate* this value-added to borrower and lender (with a credit on the tax paid due only to registered taxpayers)-which again raises the problem of identifying a reference pure interest rate.

Services provided for at an explicit charge could be subjected to tax. Nevertheless, some countries exempt all, while others limit the exemption to banking and life insurance. The exemption avoids the need to measure the tax base for financial transactions, but gives rise to other distortions in the financial markets. The denial of credit to the exempt financial institutions for the VAT charged on their inputs creates disincentives for them to outsource their business process operations. Where they render services to business clients (in B2B transactions), the blockage of input tax credits results in tax cascading, which could have a possible negative impact on their competitive position in the international markets.

Given the importance of developing the TL financial sector, careful consideration needs to be given to the treatment under a VAT. **One needs to ensure that the VAT does not have any negative impact on the international as well as domestic operations** of financial institutions operating in the country.

At a broad conceptual level, financial activities can be divided into two categories:

- (a) *principal transactions or contracts* of purchase, sale, swaps, issuance, and acceptance of financial instruments (which include loans, deposits, insurance, bonds, shares, financial derivatives, and other forms of monetary rights and obligations), and
- (b) *activities of agents, brokers, and other intermediaries*, other than principals, acting as facilitators or managers of transactions in financial instruments between the principals.

In the case of principal transactions, the consideration for the services rendered could be an explicit charge (e.g., fee for the granting of a loan, or a deposit account maintenance charge), or an implicit margin in the form of a positive or negative mark-up applied to the selling or buying price of a financial instrument (e.g., the spread between the buying and selling prices of foreign currency, or debt securities) or to the loan and deposit interest rates. There are three broad approaches currently being followed in other countries in applying the tax to these services. As shown in Table 6, under Approach A, which is followed in Europe and Canada, services of principals as

well as agents are exempted, regardless of whether the consideration takes the form of margin or an explicit fee. Both life and property and casualty insurance are exempted, while asset management services could be partially taxable.

Note that while the EU approach to exempt financial services was common in early VATs, it creates distortions, including for the financial sector itself. Much of the pressure for removing the exemption has come from the financial industry itself that seeks to become more competitive. Various proposals have been put forward to reform this lacuna in the EU VAT, but vested interests have derailed most attempts. Newer VAT systems, such as in India and South Africa, do not go the exemption route.

Under Approach B, services of third-party agents, brokers, and managers, for which consideration is always in the form of an explicit fee, are brought fully within the tax net. The exemption is restricted to principal transactions, excluding property and casualty insurance. Singapore and New Zealand VATs are examples of this approach.

Under Approach C, all explicit fees for principal transactions, as well as for the services of agents, brokers, and managers, attract tax, as in South Africa. It limits the exemption to those principal transactions where the consideration for services is earned in the form of margin.

Table 7. Options for Treatment of Financial Services Under a VAT

Nature of Services	Approach A	Approach B	Approach C
<i>Principal Services</i>			
Deposits and Loans			
Margin Revenues	Exempt	Exempt	Exempt
Explicit Fees	Exempt	Exempt	Taxable
Credit Card Services			
Interest	Exempt	Exempt	Exempt
Explicit Fees	Exempt	Exempt	Taxable
Life Insurance	Exempt	Exempt	Exempt
Property and Casualty Insurance	Exempt	Taxable	Taxable
International Services	Zero-rated	Zero-rated	Zero-rated
<i>Third-party Services</i>			
Security brokers/agents	Exempt	Taxable	Taxable
Asset Management Services	Exempt/Taxable	Taxable	Taxable

Under all three approaches, international financial transactions are generally zero-rated. Approach A was adopted when VATs were first implemented. This approach is no longer being followed. There is now a better understanding of the means of, and the need for, extending the tax to some of these services. This approach is thus not recommended. Our preferred option would be Approach C.

An important consideration is the treatment of international and business-to-business (828) transactions. As mentioned above, countries generally zero-rate international financial transactions with or for nonresidents. Singapore has effectively extended zero-rating to domestic 828 margin transactions by allowing the financial institutions to claim an additional input tax credit in respect of inputs attributable to their other exempt margin revenue from business loans and deposits. The additional input tax credit is not calculated precisely for each institution, but is factored into the overall input tax credit percentages prescribed by administration for various categories of financial institutions taking into account the mix of their business. This approach goes a long way in addressing the cascading effects of the exemption system and could be considered.

In Canada and a number of other countries, sales of investment grade gold silver and other precious metals are exempt from tax if sold in the form of bars, wafers, coins, or ingots. Articles made of such metals are taxable under the standard rules.

Physical transactions in gold and other precious metals are treated as transactions in other goods and services and should be subject to tax.

The old approach was to exempt the sector. This created a number of distortions as needed input tax credits were not available to many businesses-especially in the modern economy with the new structure of financial services.

We recommend that:

- TL should adopt the modern VAT approach (C) to restrict the scope of exemptions for financial services to:
 - Certain margin services in banking and insurance
 - Consideration in the form of interest, dividends, and sales of financial instruments, and
 - Life insurance, following the practice in most other countries.
- Property and casualty insurance should be taxable, as under the New Zealand system.
- Zero-rating be restricted to transactions with the rest of the world.
- TL should adopt the internationally standard VAT policy of exempting gold bullion (all precious metals) and bank certificates for gold investments.

VI.7. Property

The main reason for bringing the first sales of property into the VAT net is to allow the construction industry to claim credit for the VAT on inputs that can be a significant component of the cost of the construction. This maintains the principle that VAT should not "stick" to business. From an economic viewpoint, by

collecting tax on the sale of the new building the VAT effectively collects tax on the future value of all rentals on the property

By exempting long-term residential rents, investors in residential property and private owners will not have to register for the VAT or charge the VAT on their property when it is sold.

There is typically additional taxation of property through a local property tax/community charge, as well as stamp duties on sales that typically co-exist with a VAT on first sales only.

We do not explore the sub-national tax issues in this paper, although the interested reader is invited to read Ahmad and Brosio (2015), *Handbook of Multilevel Finance*.

VI.8. Tourism

Tourist rebate schemes operate in many countries to return VAT to tourists on products that they are taking out of the country, however they are not a mandatory feature of a VAT system. The design features of these arrangements vary widely around the world. It was noted that full rebates are often reduced due to outsourcing of the administration of these schemes and the consequential charging of commissions. The need to verify that the goods are actually leaving the country is also an administrative consideration. Administrative costs can be relatively high.

VII. Other design issues

VII.1. Excise taxes and VAT design

Although the design of excises is being taken up separately under the aegis of the Fiscal Reforms Commission, as argued above, excises forms an integral part of the design of the overall indirect tax system. The design of the TL VAT would be distorted unless there is a joint consideration of the rate structure of the VAT and the design and coverage of excises. The general principles for the design of excises-involving revenue requirements, externalities and distributional considerations-have been discussed above.

The constraints are again administrative:

- It is not advisable to impose excises on a broad range of goods, as this introduces the cascading and increase in costs that the VAT is meant to avoid.
- Typical goods that could attract excises, include both luxury items for distributional considerations as well as those with negative externalities:
 - Tobacco
 - Fizzy drinks and beverages (fairly easy to tax and distributionally progressive)

- o Alcohol
- o Sweets and confectionary
- o Carbon-related goods and products
- o Gold jewelry and watches
- o Cars and vehicles above 3000cc and/or luxury cars

The revenue potential as well as possible distributional impact - which could be negative in the case of tobacco products - would limit excise rates. However, the intention is to change behavior and full compensation may not be warranted.

Using different rates of excise from that in Indonesia or other neighboring countries could be expected to cause trade and possibly production arbitrage and would lead to smuggling if differences were marked. While countries in a common market always retain the option of varying the rates of excises on items of final consumption, the dangers associated with cross-border purchases or outright smuggling prevent major differences in excise rates.

Consequently, the principle of harmonizing excise rates and products to the fullest extent possible across ASEAN countries should be adopted and a unified list of products produced in cases where smuggling risks are high— e.g., in relation to tobacco products.

VII.2. Place of supply rules

The POS rules are similar in small open economies and would need to be finalized in consultation with the legal team.

As described above, the VAT proposed for TL is a consumption tax and should be applied on a destination basis.⁸ This means that supplies should be taxed where consumed-i.e., imports are taxed and exports are zero-rated.

Some considerations for the Fiscal Reforms Commission and the MOF follow:

VJJ.2.1. *Services*

Defining the place of consumption of services is often very difficult and usually unworkable in practice. International practice therefore is to use proxies to predict the place of consumption for each category of services, and apply a VAT accordingly. These proxies include:

- Services supplied by businesses established in the country or through a fixed place in the country, should be taxable in the country. The concept of 'fixed place' needs to be defined. Usually a fixed place for VAT purposes requires less presence than a permanent establishment for income tax purposes. Exported

⁸With an origin-based VAT, typically applied at the sub-national level (e.g., in Brazil), exports are taxed and imports are not, and leads to trade distortions and tax wars. This option is not advisable in a country like TL.

services should be zero-rated. Zero-rating should only apply to services rendered wholly outside the country.

- **Imported services** (*i.e.*, services supplied by non-residents to resident recipients, including a fixed place of a non-resident), if taxable according to the place of supply rules, should be taxed in the hands of the resident recipient if he is a taxable person and is not entitled to (full) input tax credits ("reverse charging").

Based on international practice and experience, **the following place of supply rules are suggested in Table 7 as the framework for a VAT in TL.**

Table 7. Options for Place of supply rules for services

Type or category of service	Place of supply
Business-to-business (B2B) services in general <ul style="list-style-type: none"> • Tangible services, e.g., architectural, engineering or maintenance services • Intangible services, e.g., e-commerce • 	<ul style="list-style-type: none"> • Where physically performed • Where the recipient is established
Business-to-consumer (B2C) services in general <ul style="list-style-type: none"> • In general • For certain listed services 	<ul style="list-style-type: none"> • Where the supplier is established • Where the customer is established or where the service is effectively used and enjoyed
Certain specific services: <ul style="list-style-type: none"> • Services in connection with real property • Car leasing • Telecommunication services, e-services • Transportation of goods, passengers 	<ul style="list-style-type: none"> • Where the real property is established • Where the car is made available to the customer; maybe with distinction between short-term and long-term leasing • Where the customer is established, or where the service is effectively used and enjoyed • Place of departure of the transport

VI.2.2. Import & export of goods

The VAT treatment of imports and exports of goods generally closely follows the customs rules. This includes the application of internationally accepted or required exemptions from import duties and taxes (temporary importation, relief consignments, diplomatic exemptions, travelers' allowances, etc.).

A VAT on importation of goods is levied on the customs value of the goods, including duties and taxes (customs duties and fees, levies, excise taxes, etc.). Special rules may be required to deal with specific issues such as triangular transactions ("drop shipments") and repairs under warranty.

VI.2.3. Free trade zones

Under the standard design endorsed by international agencies free trade zones are typically treated as being outside the country for import duties and other taxes. We used the terminology interchangeably with Special Economic Zones

- Goods entering into the free trade zone from outside TL would not be subject to customs duties or excise taxes.
- Supplies entering a free trade zone can either be zero-rated, or subject to a VAT which is subsequently credited and refunded to the customer in the free trade zone when the good is exported.
 - o Under the traditional models, imports to the free trade zone are not subjected to the VAT, and no refunds are provided on export. This assumes that the country can effectively ring-fence the free trade zone.
 - o If there is contiguous production or transactions with a danger of leakage (e.g., the case of Atauro), or need to establish the true magnitude of transactions in the free trade zone (Oecussi), the recommended approach is to require payment of the VAT on imports, but to allow for full refunds/credits on exports.
 - o Goods entering TL from a free-trade zone are subject to the normal import rules, i.e. customs duties and fees, levies, excise taxes, and the VAT chain remains intact (or the VAT is imposed, as appropriate).

VIII. Administration and implementation design issues

Although the details of both the tax administration and VAT-drafting will have to carefully coordinated as the missions take place subsequently, we present some of the **key implications of the VAT design that are relevant to both exercises.** There will need to be careful coordination with both teams as their work progresses,

and some issues such as the threshold and the administrative treatment of smaller taxpayers can only be determined in conjunction with the tax administration team.

Some of the main considerations include the following:

- Self -assessment is the only viable approach to administering a VAT. Under this approach, taxpayers are responsible for calculating and paying their own liability. Only tax basis information is sent to the tax administration. Compliance is based on risk-assessment and post- return audits.
- Appropriate tax periods and filing due dates need to be adopted. Typically, these might be monthly for large taxpayers and quarterly for others, (although other options can be taken). Monthly filing and payment cycles for large taxpayers ensure that most VAT revenue is paid quickly..
- A formal dispute resolution mechanism, and the types of tax administration decisions which are open to formal review, should be specified in the VAT law. The time available for taxpayers to object should be limited (60 days would be typical). Internal review processes should as far as possible be independent of the original decision-maker. Processes to identify any judicial challenges that might threaten the structure or core rules of the VAT should be put in place
- The administration of the VAT should be the responsibility of a tax department and integrated with the management of other domestic taxes.
- An efficient information technology (IT) is required for an effective VAT administration. In particular, an integrated IT package that integrates core tax administration processes and provides for the integrated administration of a range of taxes (particularly linking the VAT and income taxes) is highly desirable. Investment in such systems and technology will pay dividends in both implementation and tax administration long-term.
- A conceptual design that incorporates the policy requirements with administrative feasibility is needed to initiate the choice of an IT system- this will be undertaken by the Tax Administration team.
- A modern TIN (Taxpayer Identification Number) will be required for the VAT registration process. Registration systems that are old and that do not use high integrity taxpayer numbers will not be suitable for the VAT. Re-registration of taxpayers will in any event be required to gather the specific information needed for the VAT.

General VAT implementation and administration issues

- Professionally developed campaigns to prepare and educate the community about the VAT and the reasons for its introduction should be ready and

activated as soon as the decisions on major policy settings and implementation dates have been made.

- Businesses will need adequate time to prepare for their VAT implementation and on-going management. A year between the passing of the VAT law and the VAT commencement should be allowed
- A minimum of 6 months and preferably a year from when the VAT law is passed should be allowed to complete the taxpayer registration process properly and to ensure a high-quality registration data-base. Successful VAT implementation and operation, and the credibility of the system will be jeopardized if the registration data is not maintained to the highest level
- Good information about the potential taxpayer base for the VAT is required before detailed planning can commence. Projects to establish the potential base by turnover size of entity and other key variables should be commenced as soon as possible if they are not already underway.
- VAT administration involves refunding large amounts of excess credits. Fast processing of refunds balanced with checks to ensure that they are valid is an important part of the administration cycle.
- To assist with compliance and reduce risks, the VAT Refunds should be made only by direct credit to bank accounts. No cheques should be issued.
- The VAT return forms need to be simple and designed for automated data capture. Preferably, they should be highly controlled through techniques such as unique numbering and sending direct to taxpayers each period. This approach has much higher integrity and efficiency benefits over making blank forms freely available.
- Efforts should be made to create a compliance environment that encourages taxpayers to comply "voluntarily". This will require a combination of ensuring that taxpayers know how to comply, a strong framework of penalties in the law, and a highly visible active compliance program undertaken by the administration. A combination of direct compliance strategies is needed (including refund checks, audits and fraud investigations is required, together with necessary penalties). Both the tax administration and the VAT law drafting teams will need to collaborate closely in this regard.
- A formal risk assessment model should be used to understand the key risks and ensure that compliance strategies are aligned to them. Risk should be assessed from multiple perspectives such as taxpayer segment, industry, and the different the VAT risk areas (real revenue, timing and technical).

- Tax administrations are typically organized around large, medium and small (if relevant) taxpayer segments, although integrated information is of great importance in the context of informality that we have described.
 - A Large Taxpayer Unit (LTU) is important from the revenue perspective, but information flows between the taxpayer segments should generate an integrated system in order to block informality or incentives to cheat.
 - Administrations should also create a strong headquarters given a strategic direction, with national work programs, processes and procedures, to monitor branch office performance, and to provide infrastructure (including information technology).

A tax administration mission (in November 2015) will assist in developing the strategic directions, detailed work plan, and a conceptual design for the IT system.

There will be a need to coordinate this with the VAT law drafting exercise that is about to be initiated.

IX. Sequencing of policy measures with respect to administrative timetable

The overall timetable for the fiscal reforms is shown in Chart 1 (presentation by the Fiscal Reforms Commission to the Council of Ministers), and the potential time taken for the tax administration reforms is shown in Chart 2 (from ADB 2010). The Tax Administration mission will refine the latter in November 2015.

- The timetable for fiscal reforms is determined by the political cycle and the mandate of the Fiscal Reform Commission.
- Much of the tax policy design for the VAT, excises, income and local taxes needs to be in place by the end of 2015. While detailed research work using household and firm level data is likely to continue through 2016, the main policy options need to be identified within the 2015 calendar year to enable the legal framework to be developed more or less in parallel.
- The legal framework for the new VAT law, revisions to the income tax law, and developing the basis for local tax framework needs to be developed to begin to be discussed by Parliament during the period January-June 2016.

Chart 1. Timor-Leste: Timetable for Fiscal Reforms

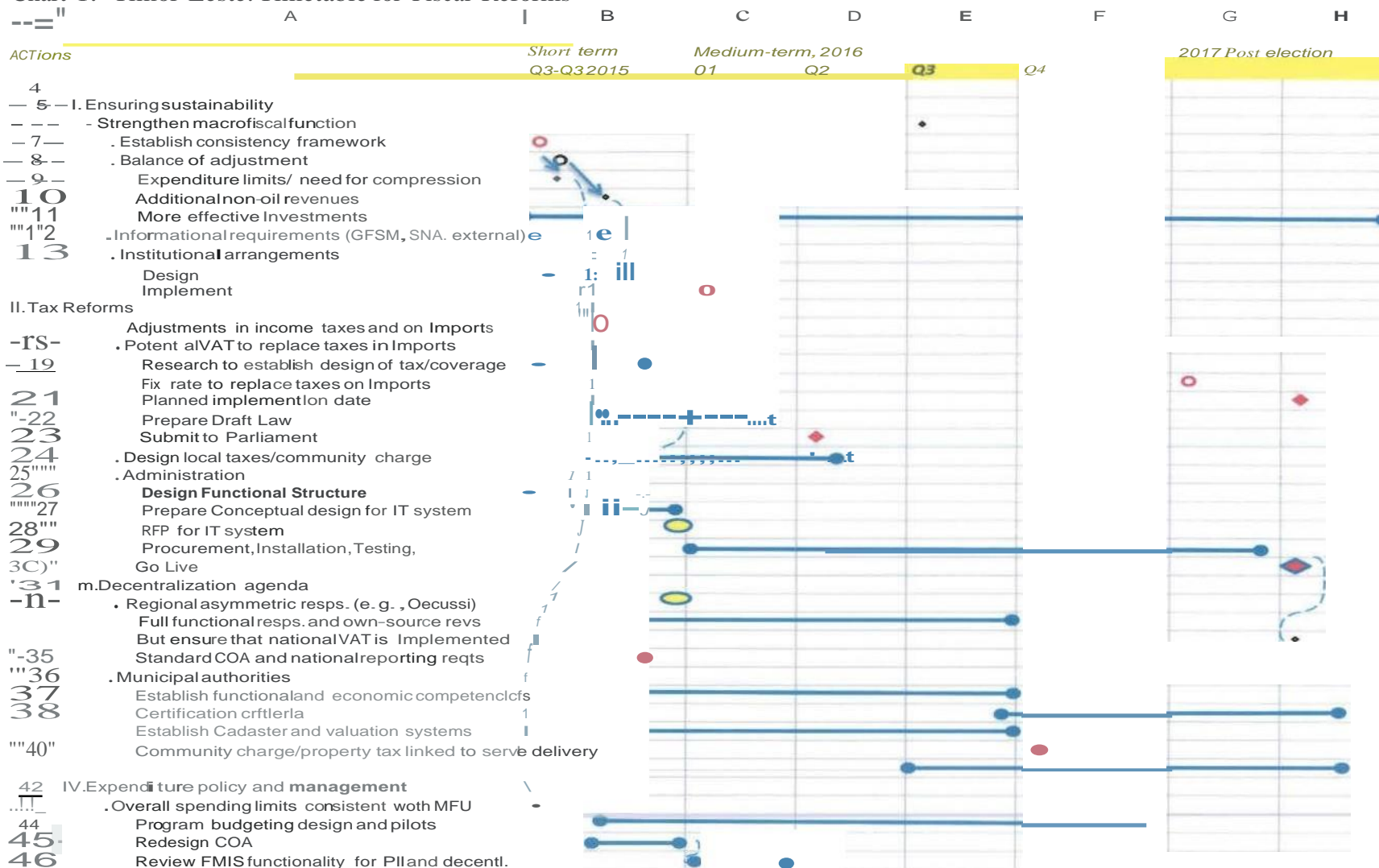
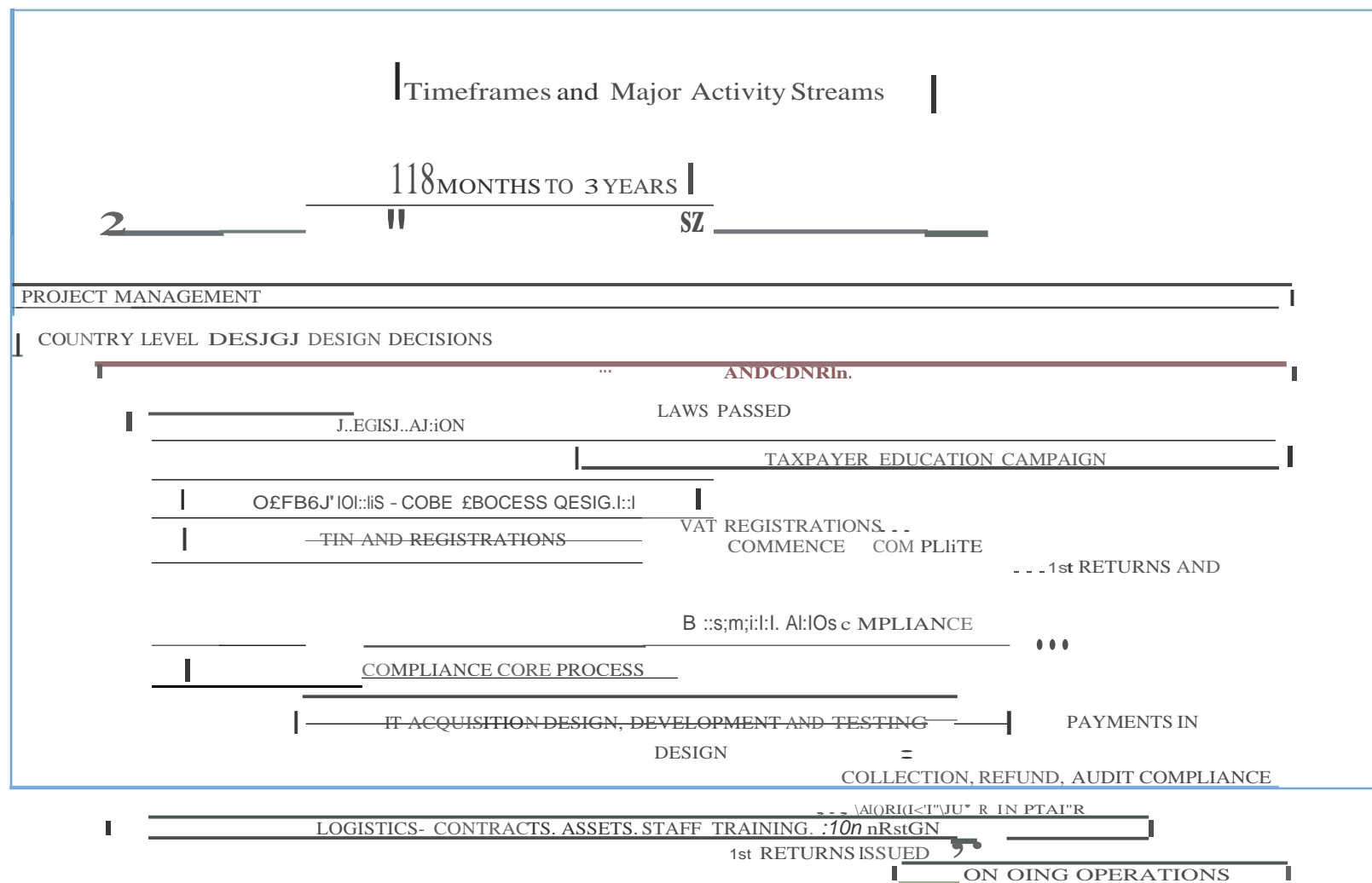


Chart 2 Illustrative timetable for tax administration strengthening



Source: Ahmad and Al-Faris (2010).

The broad framework of the new tax administration will be driven by the self-assessment system to be developed for the VAT, extending to the income tax. As suggested in ADB 2010, this could easily take up to two-and a half years. With a tighter legislative cycle, and concerted actions on the tax administration fronts, the minimum time required could be brought down to one and a half years, although it is safer to aim for implementation of a VAT from January 1, 2018.

- Any significant modernization of the income tax regime will also have to follow the timetable for the tax administration reforms. Consequently, removal of the withholding regime, desirable as it may be, cannot be considered in the short-run without running the danger of a loss in revenues.

Given that the VAT is not likely to be in place in the short-run, any additional domestic resource mobilization efforts have to focus on the instruments currently in situ. With the income tax holidays, and loss carry forward provisions, the main remaining tax handles are taxation of imports (through the existing sales tax) or excises on tobacco and alcohol, fuel, and luxury durables.

- The estimates of excises on tobacco and alcohol will be conducted separately under the aegis of the Fiscal Reforms Commission, but we note here that the tax rates in Indonesia and neighboring countries will act to limit the extent to which taxes on these items can be increased without running the risk of a major increase in smuggling.
- Excises on petroleum must be considered in the context of a green growth strategy, and could be thought of as a precursor to a more general carbon tax. As argued in Ahmad and Stern (2011), this generates gainers and losers, and again should be thought of as part of a "package of reforms", with offsetting gainers and losers, in order to minimize the need for additional compensatory measures, given the already high level of social spending in relation to domestic revenue generation. The Indonesian experience in recent years in this regard is quite instructive. The fall in petroleum prices makes it easier to bring in an arms' length adjustment mechanism that is linked to the international price plus a premium on congestion and pollution.
- It is likely that the revenue potential from excises on durables and luxury goods (such as cars) will be limited.
- The bulk of any additional revenues in the short run must come from a broad-based sales tax largely on imports.
- Both the price and distributional effects of the VAT will largely depend on the taxes and tariffs being replaced (say as of January 1, 2018), and the need for any additional revenues at that time.

The relevant comparisons will then be:

- Replacing the effective taxes on imports (2.5% customs, and 2.5% sales tax) by a potentially revenue neutral 5% VAT

- Setting the VAT at 10% to meet the Fiscal Reform Commission Revenue targets. This will be analogous to the option above and will increase revenues, efficiency, and possibly equity, as argued above.
- Excises should be chosen to remain in situ with a new VAT regime.

The legal framework for the VAT will require concerted efforts to draft a new VAT law in parallel with the policy and administrative reforms.

- The VAT law and regulations need to be drafted in parallel in three languages:
 - English
 - Portuguese; and
 - Tetum.
- The drafting work needs to be initiated quickly with submission to Parliament in January 2016, in order to keep the timetable of the fiscal reforms in sync with the electoral cycle.

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Appendix 1 VAT revenue calculations:

Alternative case: Maintaining investment share over projection period

1. VAT Base for 2013 GOP projected by MOF

Data description and details of adjustments		Amount (US\$ million)	Note
Starting point of estimation: non-ail GOP		U19	
AOJSTH1:	Trade balance (for domestic VAT)		
H	Imports value (ex. UN)	101	
(+)	Imports value (ex. UN)	665	
ADJSU2:	Capital formation (for domestic VAT)		
H	Gross domestic capital formation	511	
(-)	Capital formation of resident buildings	28	
(-)	Capital formation in exempt sectors (ex. UN)		Assumption: no capital formation in agriculture
ADJSU1:	Exempt sectors ¹		
H	Value added of exempt sectors (factor cost)		Value added in agriculture
H	Indirect taxes paid by exempt sectors (adjusted)		
AOJSTH4:	Cascading tax credit by invoice method		Assuming agriculture at the beginning of value chain
(-)	Sales of exempt sectors to taxable sectors		
(-)	Taxed inputs in exportable agriculture		
AOJSTIS:	Government expenditure		
H	(penditure on wages & salaries (non-taxable))	1418	
ADJSU6:	Final private expenditure (corrections)		Assumption: no exemptions for final private expenditure
H	Exempt expenditures (ex. UN)	0	
(-)	Taxed inputs in exempt expenditures (due to)		
(-)	Foreign expenditures in local market	0	
(-)	Expenditure abroad by residents	0	
AOJSU7:	Expenditure that should be reduced (admission)		
H	Sales of firms below threshold		Threshold set in 100k
(-)	Taxed inputs by firms below threshold (due to cascading)		
AOJSUS:	Other exemptions		
H	Exempt indirect taxes that are to be replaced	30.06	Sales, import, and livestock tax
ADJSU9:	Collection of taxes		
H	Estimated extent of loss	841.08	58%
		725.07	50%
		108.60	75%
Potential VAT		1.005	
Result SOU		36.4	25%
Result S9			

Case 1. GOP conservative projections (3.6% annual real growth and 2% inflation out to 2020)

Year	Non-oil GOP Nominal	Non-oil GOP Real	Real GOP growth rate	Inflation	Source
2008	694.00	756.00			National Accounts
2009	827.00	854.00	0.13	0.05	National Accounts
2010	934.00	934.00	0.09	0.03	National Accounts
2011	1138.00	1023.00	0.10	0.11	National Accounts
2012	1295.00	1088.00	0.06	0.02	National Accounts
2013	1319.00	1118.00	0.03	-0.01	National Accounts
2014	1408.69	1185.08	0.06	0.01	MoF projection
2015	1494.62	1233.67	0.041	0.02	MoF projection (inflation assumed)
2016	1600.74	1296.59	0.051	0.02	MoF projection (inflation assumed)
2017	1740.00	1383.46	0.067	0.02	MoF projection (inflation assumed)
2018	1905.31	1487.22	0.075	0.02	MoF projection (inflation assumed)
2019	2095.84	1606.19	0.080	0.02	Assumption (MoF forecasts only to 2018)
2020	2305.42	1734.69	0.080	0.02	Assumption (MoF forecasts only to 2018)

3. VAT revenue/VAT base assumed constant as % of GOP

Year	VAT revenue (5%) 42%	VAT revenue (10%) 42%	VAT revenue (5%) 50%	VAT revenue (10%) 50%	VAT revenue (5%) 25%	VAT revenue (10%) 25%
2013	30.45	60.91	36.25	72.51	18.13	36.25
2014	32.52	65.05	38.72	77.44	19.36	38.72
2015	34.51	69.02	41.08	82.16	20.54	41.08
2016	36.96	73.92	44.00	87.99	22.00	44.00
2017	40.17	80.35	47.83	95.65	23.91	47.83
2018	43.99	87.98	52.37	104.74	26.18	52.37
2019	48.39	96.78	57.61	115.21	28.80	57.61
2020	53.23	106.45	63.37	126.73	31.68	63.37

Appendix:2

I. Model of effective taxes {Ahmad and Stern 1991):

- Net change in price vector on replacing effective customs tariffs and sales taxes
- General model with full shifting: This also measures the extent of cascading due to the taxation of intermediate stages.

$$t' = t^d (1 - A^d)^{-1} + t^m A^m (1 - A^d)^{-1}$$

- On imports, which are the bulk of the consumption in TL, the effect is zero..
- Some impact on the domestic component of produced items given by the first element {mainly services}; likely to be small given production and consumption patterns in TL. This is also, in general, constrained by free flow of goods and overall prices of competing imported goods.

II. Model of directions of reform based on optimal tax considerations {Ahmad and Stern 1991):

- Need consumption shares (almost there) and own- and cross-price elasticities (will have to use guesstimates)
- Shows how consumption patterns adjust with price changes
 - Could be quite limited in TL context
- Role of inequality aversion parameters
- Very high values of inequality aversion_ problem becomes the net impact on the consumption share of the poorest decile/quintile
- Rough sketch of Ahmad and Stern (1991)

Net welfare losses as a result of the effective price changes from the reforms, include effects on households {numerator}, relative to production and revenue effects (denominator)

$$A_i = \frac{\frac{\partial V}{\partial t_i}}{\frac{\partial R}{\partial t_i}} = \frac{\sum_h \beta^h x_i^h}{X_i + \sum_{j=1}^n t_j^e \frac{\partial X_j}{\partial p_i}}$$

Estimates from India (raising a rupee from various commodity groups)

India: Effective taxes and rankings of welfare losses, ' ,

Commodity	Effective tax, %	Ranking	Ranking	Ranking	Ranking	Ranking
Cereals	0.052	8	7	2	2	2
Milk and dairy products	0.009	9	9	9	9	8
Edible Oils	0.083	6	6	4	4	5
Meat.fish.eggs	0.014	7	8	6	5	
Sugar and gur	0.069	5	5	5	5	6
Other foods	0.114	4	3	3	3	7
Clothing	0.242	1	1	7	7	
Fuel and light	0.274	2	2	1	1	1
Other non-food	0.133	3	4	8	8	1

Source: Ahmad and Stern (1991)

Estimate from Mexico (Uruza, 2005, "Ahmad and Stern revisited.").

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		Dr&m of inequality anrsioa			
		r-0	r-1	r-2	c:J
Non-proccsStd food and dim)• products	J	1018	0.125	0.0 1	0040
	AI	1.062	0129	0053	0GU
Processed food.clothmg and appl:	J	1096	0055	000&	0004
	A•	10SS	0054	0008	0004
Akobo!ic bn•mges and tobacto	J	0869	0.098	0044	0036
	AI	0.851	0.096	0.043	0035
MeciXmtS	J	1011	0.059	0.011	0006
	AI	0.988	0051	0010	0006
Edaaauoo	i.c	1021	0.015	0.004	0.001
	As	0992	0.0J	0.00J	0.001

Source: Uruza (2005

III. Approximating the distributional effects of VAT introduction

In order to analyze the potential impact on different socioeconomic groups of the introduction of VAT we attempt to estimate the compensating variation.

In strict terms, the compensating variation is defined as the amount of resources that a household would require to keep its level of utility constant after a policy-induced change in prices. There are two problems in measuring this concept. First, utility is unobservable. Second, the prices of different goods may be affected differently by a given policy change, which may result in a change in relative prices that in turns affect the possible combinations of goods that yield a given level of utility.

In light of this, and following Deaton (1989) we assume away the changes in relative prices introduced by the VAT, and approximate the compensating variation by the dollar amount a household would need to keep their consumption basket unaltered after the introduction of VAT divided by the household's total expenditure before the VAT (dB/x). Using data from the Timor-Leste Standards of Living Survey 2014 (TLSLS 2014) we calculate the approximate compensating variation as

$$(dB/x) = \sum_i (p_i/q_i) d \ln p_i$$

where p_i/q_i is the share of good i in total expenditure x and $d \ln p_i$ is the total change in the price of good i brought on by the introduction of the VAT, which for our calculations we assume to be equal to the rate of the VAT (full pass-through). This assumes further that households purchase 100% of their consumption of good i and do not produce good i either for self-consumption or for sale in the market.