

Transitioning the Tax System to Take Advantage of the Natural Gas-Rich Economy

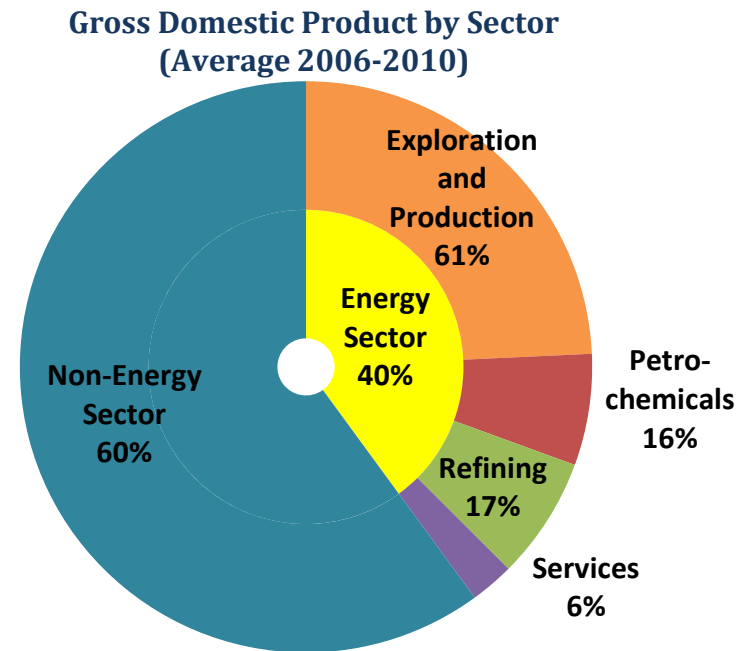
By: Valerie Mercer-Blackman
Lead Economics Specialist
Inter-American Development Bank
Conference on the Economy, Port of Spain, October 12, 2012

Outline of presentation

1. What is the current production system and tax structure in Trinidad (vis-à-vis investment)?
2. What are the issues and best practices regarding taxation and revenue management in hydrocarbon economies, and how does the tax system measure up in Trinidad?

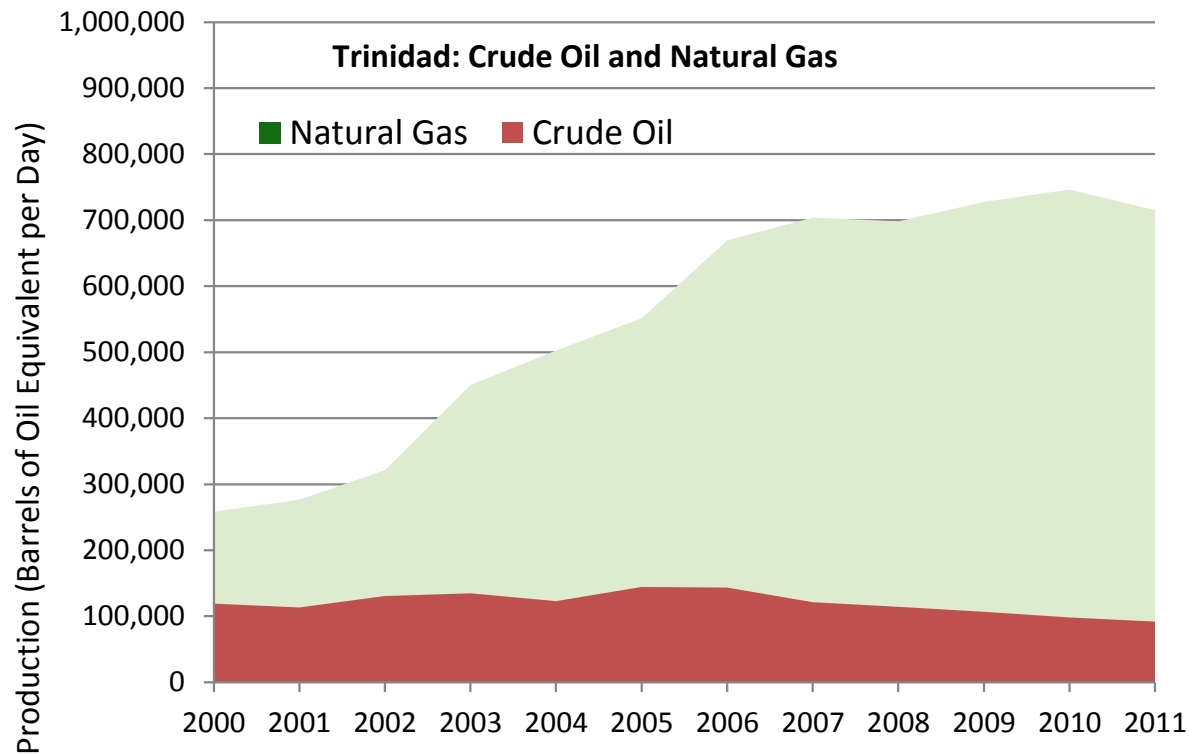
Production structure in Trinidad and Tobago

- Oil and gas production account for 40% of GDP, 80% of the exports and 58% of fiscal revenues in 2011.
- The economy cannot diversify in the short-term—especially when hydrocarbon prices are high.



Source: Central Statistical Office.

Moreover, most of the production is gas...reducing resource curse syndrome.



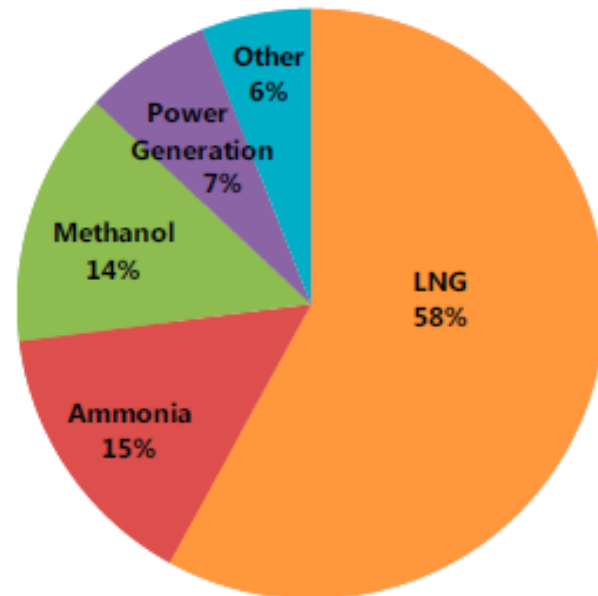
Sources: Ministry of Energy and Energy Affairs.

We need to understand economics of natural gas.

- **Production structure:** same investors and expertise as petroleum
- **Distribution:** depends on final use
- **Transportation:** pipelines or LNG terminals
- **Consumption:** oil for transportation, gas for electricity (but competes with coal—and it's a non-tradable sector)



Figure 5. Natural Gas Utilization by Sector
(In 2010)



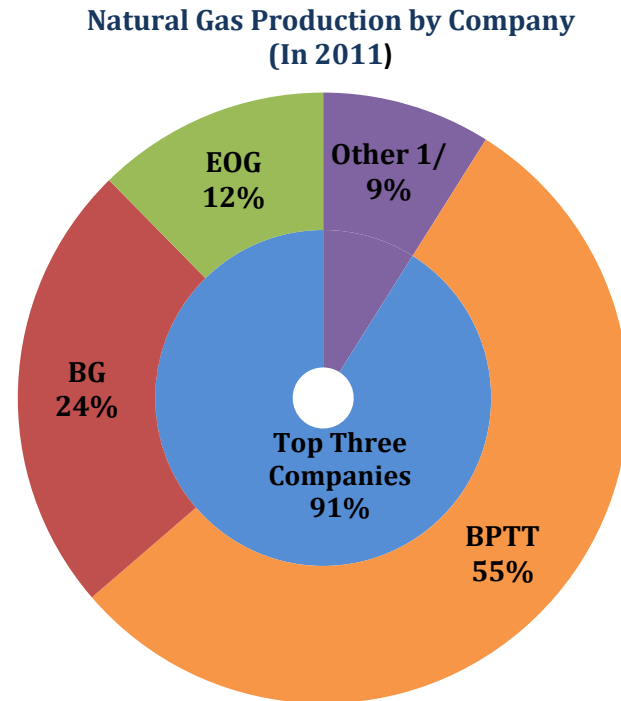
Source: Ministry of Energy and Energy Affairs



IDB Country
Department
Caribbean

..so price determination is different.

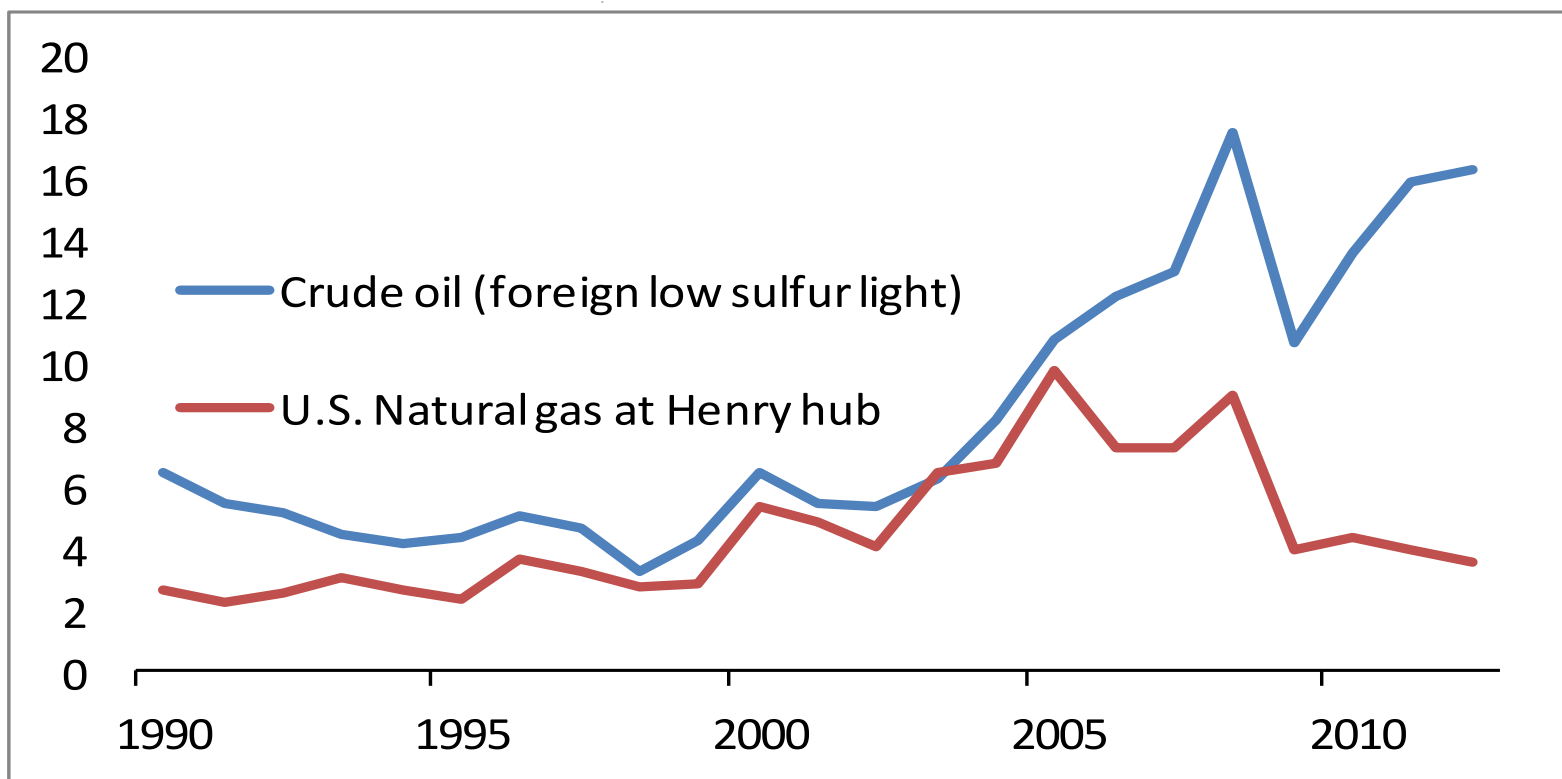
- Segmented global gas markets
- More difficult to price sales to downstream (in Trinidad public sector – NGC- is the middleman, and few producers) 
- Most gas export sales are under long-term (20-30 year) contract, and the terms of sales agreements reflect numerous transport factors.
- In some cases gas prices may be below cost of production!



Source: Ministry of Energy and Energy Affairs.
1/ BHP Billiton, Repsol, and Petrotrin including its Trinmar operations.

International developments have led to recent delinking of U.S. Natural Gas Prices to oil

Oil and natural gas prices
2010 dollars per million Btu



Source: EIA, Annual Energy Outlook 2012 Reference Case and H. Monroe

..and the delinking of the prices will continue.

- China produced more than 18 million cars in 2011 and it is expected that the country's auto market will hit 30 million cars by the end of this decade. Sales of cars has grown by 20 percent to 30 percent a year since 2005.
- While demand for gas is expected to increase as well according to the IEA—largely for power generation--there will be ample supplies to meet the demand (including LNG terminals and shale gas production).

What is the fiscal Regime for oil and gas production in Trinidad?

- Mostly system of production-sharing agreements: gives the risk and expertise to the oil companies, but also allows them to recuperate costs. Preferred by investors.
- **A Royalty 12.5%** for land and marine production. The royalty rate is 10% for marine production off the West Coast of Trinidad. There are also special sliding scale as much as 15%.
- **Petroleum Profits Tax (P.P.T.)** or corporation tax charged at a rate of 50% of gross revenues from all sources less deductible expenses and allowances.
- A **Supplemental Petroleum Tax (S.P.T.)** charged on production of crude oil and based on an oil price sensitive rate structure. (0% for crude prices under US\$13.01 a barrel to a maximum of 33% for those over US\$49.50 to \$90 a barrel. New fields now pay 25%. Windfall feature kicks in at over US\$90/barrel. 20% discount for small and mature fields.
- A **Production Levy** of up to 3% of gross income from crude oil. The Levy provides the subsidy for petroleum products sold on the domestic market.
- An **Unemployment Levy of 5%** is also charged., with some deductions allowed, Other small ones.

Compared to other countries, Trinidad a little above average

Table 4. Global Taxation of Oil Production

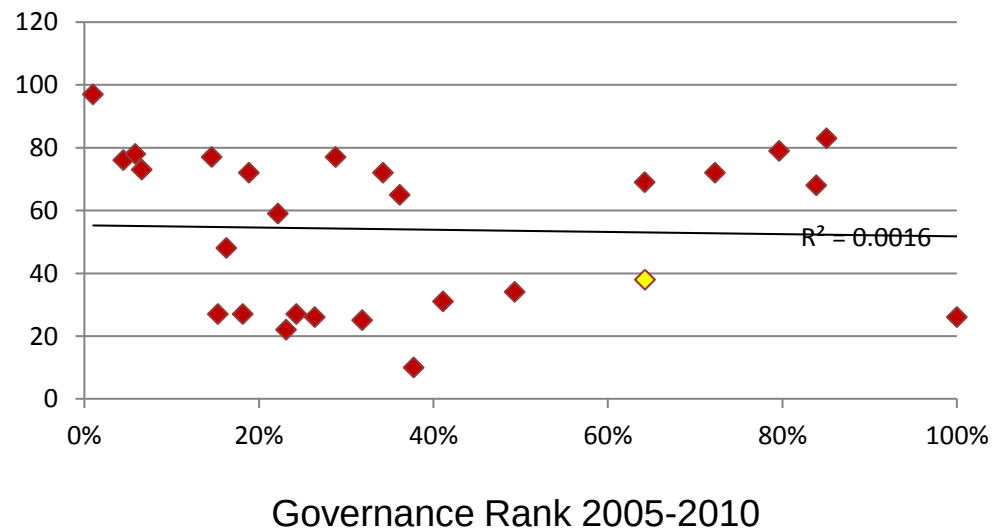
	Royalties (% of production)	Production sharing	Income tax rate
Algeria	10-20%	60-88%	Gov. Share
Angola		15-80%	50%
Australia	40%		30%
Azerbaijan	None	50-90%	32%
Brazil			15%
Canada	10-12.5%		31-39% (22.12%)
Chad	12.50%	None	50%
China	Nat. res. Tax		33%
Congo			
Ecuador	12.5-18.5%	None	25%
India			42%
Indonesia		75-90%	30%
Kazakhstan	Up to 20%	Negotiable	30%
Kuwait			
Libya	16.67%	5-90%	None
Malaysia	10%	50-70%	38%
Mexico	None	None	35%
Nigeria	0-20%	20-65%	50-85%
Norway	50%		28%
Oman	None	77.5-80%	None
Qatar	None	35-90%	Gov. Share
Russia	16.50%	Applicable	exp. Tax
Saudi Arabia			
Trinidad and Tobago	12.50%	Variable	50%
UAE			
UK	12.5%	None	40-70%
US	15% average 1/	None	35%
Venezuela	30%	None	50%
Vietnam	6-25%	65-80%	Gov. Share
Yemen	3-9%	50-86%	None

Source: various, mainly from government information publications
1/ On Federal land. Complex calculation, States also charge

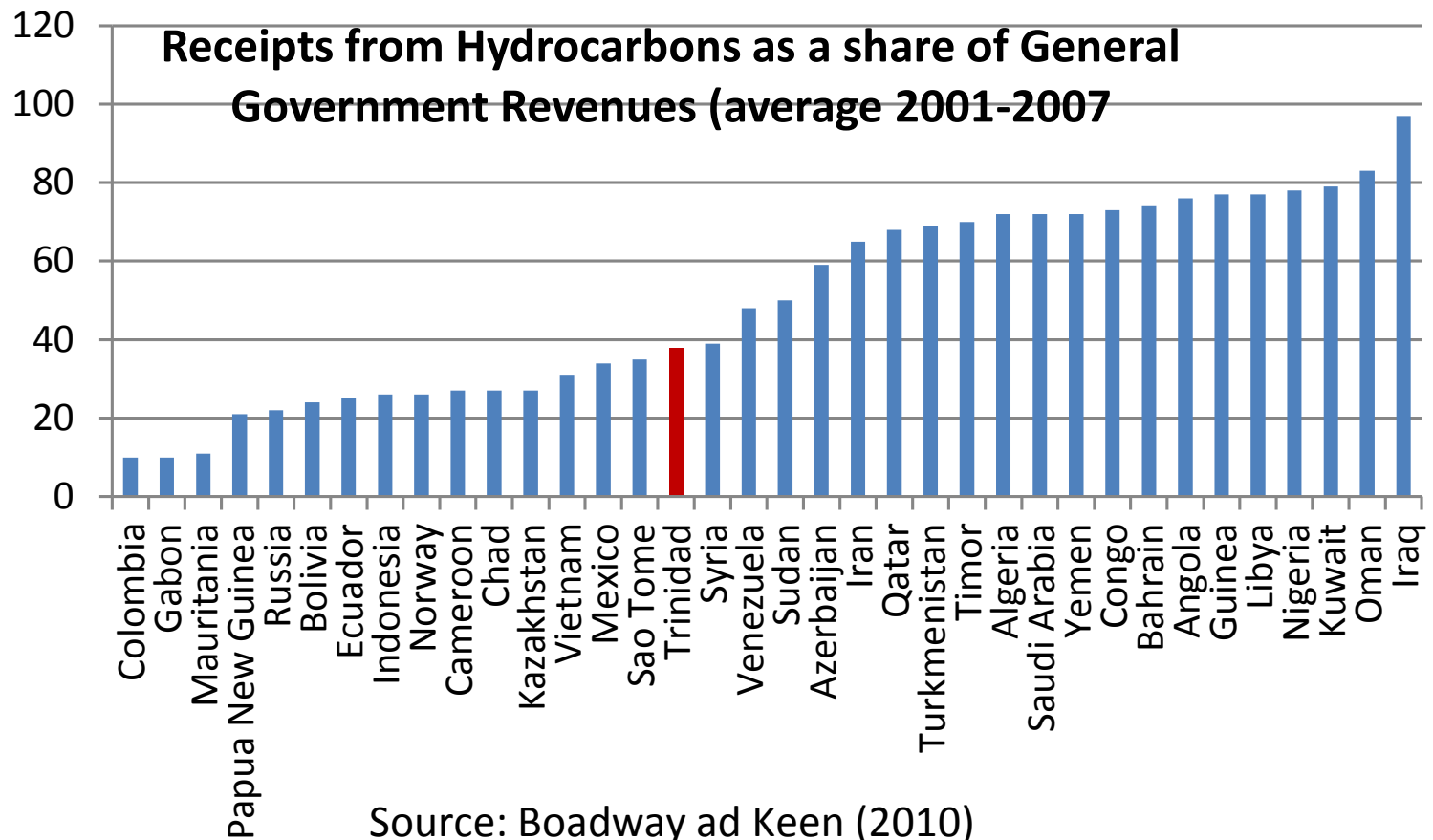
But investors care more about political stability than tax take

- Studies show that once a tax rate is agreed, investors prefer stability.
- Ease of exploration matters: no relationship between tax revenues and governance indicators.

Relationship between governance indicators and share of oil and gas revenues on total government revenues, various countries



In terms of revenue collection, Trinidad is about average



Special circumstances to take into account when taxing hydrocarbons

- **High sunk costs** and long production periods.
 - Creates a time-inconsistency problem
- **Exhaustability**: consideration of when to leave in ground.
- In theory government should **try to tax resource rents**. But full cost of resource exploitation has to include cost of unsuccessful exploitation as well.
- **Uncertainty** about geology and global markets (i.e., shale gas discoveries).
- **Asymmetry of information** between authorities and production/exploration companies. Enhance transparency.
- **International considerations**: tax of host country of company and other places—complicated by transfer pricing practices
- Difficult to **separate some production costs** between oil and gas (such as maintenance).

Trinidad in general takes into considerations good taxing practices, but..

- Governments should **strive to make the system neutral**, in other words, the taxes should not affect decisions of exploration, abandonment and timing.
- Possibly implement **Fiscal Stability clauses** with contingencies: some countries change fiscal regimes too much in response to prices.
- In addition to offering a standard tax regime for oil, **considerations about the bidding processes** are important.
- Companies and tax bills should separate oil and gas revenues if possible .
- **Governments should try to establish taxation based on reasonable gas prices** (depends on the terms of sales agreements which reflect numerous factors, such as level of tariffs of owners, regasification and pipeline costs, distances, etc.
- If using the fiscal regime as an investment incentive scheme, **admit that it cannot control all factors** (such as tax systems in other countries and company 'threshold' prices).

In estimating incentives, prices trump fiscal regime for oil

Marginal Effective Tax rates under Different Price and Tax Assumptions Trinidad and Tobago

	oil price"\$60/barrel	Oil price: \$89/barrel
With old supplemental tax regime (42%)	70.1	10.3
With new supplemental tax regime (33%)	65	-5.1
For new investments (25%)	60.4	-18.5

A *Marginal effective tax rate (METR)* is an indicator of the deviation between the optimum level of investment to extract available resources and the investment that will be forthcoming with a given fiscal regime.

Both government and company profitability increase with higher prices ..so tweaking the fiscal system may have greater costs in terms of investment, because its difficult to know company thresholds.

Conclusions

- Desirable to build enough flexibility into a hydrocarbon tax system to allow for automatic adjustments to unforeseen changes and to minimize the costly need for renegotiations
- Tie unconventional taxes into diversification strategy such as infrastructure quid-pro-quo (HSF key in this regard).
- The rise in the relative importance of natural gas may be the silver lining in the 'resource curse' cloud.



Thank you