The Diversification Challenge - Lessons from the Experience of Trinidad and Tobago

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Former Governor, Central Bank of Trinidad and Tobago

“Harnessing Natural Resource Wealth for Inclusive Growth and Economic Development”

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Outline

• Basic Facts about Trinidad and Tobago
• Economic Background
• The Diversification Challenge
• Downstream Diversification
• But Limited Diversification of the Economy
• Lessons Learnt
• Conclusion
1. Basic Facts about Trinidad and Tobago

- Small country (approximately 5,128 km²) - located in the Caribbean, Northeast of Venezuela
- A Parliamentary Democracy with a population of 1.3 million
- Once a major sugar-producing colony for Britain: gained Independence in 1962
- Oil was discovered in the 1860s. Production peaked at 240,000 barrels per day in 1978 and has since declined to a current production of 90,000 barrels per day.
- Now largely considered a Gas-based economy with an output of 4122 million standard cubic feet per day. (2012)
- Oil and gas production together stands at approximately 800 thousand barrels per day oil equivalent
Crude Oil and Natural Gas Production

Barrels of Oil Equivalent per Day

- Crude Oil
- Natural Gas

Data from 2000 to 2012.
2. Background: Contribution of the Energy Sector

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<tbody>
<tr>
<td>... Share of Total GDP (%)</td>
<td>31.3</td>
<td>36</td>
<td>47</td>
<td>37.1</td>
<td>43.7</td>
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<tr>
<td>... Share of Government revenue (%)</td>
<td>30.2</td>
<td>42.8</td>
<td>61.9</td>
<td>49.5</td>
<td>54.3</td>
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<tr>
<td>... Share of total exports (%)</td>
<td>81.2</td>
<td>81.5</td>
<td>91.1</td>
<td>85.4</td>
<td>81.4</td>
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<tr>
<td>... Share of total Employment (%)</td>
<td>3.2</td>
<td>3.2</td>
<td>3.5</td>
<td>3.3</td>
<td>3.5</td>
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Source: Central Bank of Trinidad and Tobago- Annual Economic Surveys
Benefits from Oil and Gas

• Oil and gas have contributed greatly to our current relatively high standard of living.

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<tr>
<td>GDP Per Capita (Current US $)</td>
<td>6,430.9</td>
<td>8,751.6</td>
<td>14,162.8</td>
<td>14,557.0</td>
<td>17,934.1</td>
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<td>Official Reserves ($ US Million)</td>
<td>1,405.5</td>
<td>2,257.8</td>
<td>6,530.8</td>
<td>8,651.6</td>
<td>9,200.7</td>
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<td>Human Development Index (value)</td>
<td>.805</td>
<td>.801</td>
<td>.833</td>
<td></td>
<td>.760</td>
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<tr>
<td>Heritage and Stabilisation Fund (US $Mn)</td>
<td>2,888</td>
<td>2,965</td>
<td>3,622</td>
<td>4,084</td>
<td>4,712.4</td>
</tr>
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Source: Central Bank of Trinidad and Tobago: Annual Economic Surveys, World Bank, MOFTT
Oil and Gas Reserves

- Energy Sector prospects now uncertain due to:
  - (i) Declining Reserves
  - (ii) Limited Exploration Activity
  - (iii) Competition from Shale Gas

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<th>Proven</th>
<th>Probable</th>
<th>Possible</th>
<th>Total</th>
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<tbody>
<tr>
<td>Oil (million barrels)</td>
<td>606</td>
<td>335</td>
<td>1,561</td>
<td>2,502</td>
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<tr>
<td>In years of production</td>
<td>14</td>
<td>8</td>
<td>35</td>
<td>57</td>
</tr>
<tr>
<td>Gas (trillion Cubic feet)</td>
<td>13.3</td>
<td>6.0</td>
<td>6.2</td>
<td>25.5</td>
</tr>
<tr>
<td>In years of production</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>18</td>
</tr>
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</table>

Sources: Ministry of Energy and Energy Affairs (2007 Oil Audit) and Ryder Scott Company (2011 Gas Audit).

1/ Based on oil production of 44.3 million barrels in 2007 and gas production of 1.5 trillion cubic feet in 2011.
3. The Diversification Challenge

- The challenge faced by oil/gas based resource-rich countries is to use the resource rents to develop a vibrant non-energy export-based sector, which would guarantee sustainability when the natural resources are exhausted.

- Uncertain energy outlook makes the need for diversification even more critical.
How has Trinidad and Tobago faced the Diversification Challenge?

- Considerable Diversification of the Energy Sector:
  - Liquefied Natural Gas
  - Methanol
  - Ammonia
  - Urea
  - Iron and Steel

- Limited Diversification of the Economy
4. Downstream Diversification

- Trinidad and Tobago’s downstream energy sector is now comprised of:
  - 4 LNG trains - main supplier of LNG to the East Coast of the US
  - Methanol Plants - largest exporter of methanol in the world
  - Ammonia Plants
  - Urea Plants

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<tr>
<td>... Share of GDP (%)</td>
<td>4.3</td>
<td>4.6</td>
<td>7.2</td>
<td>6.8</td>
<td>8.7</td>
</tr>
<tr>
<td>... Share of Total Exports (%)</td>
<td>17.3</td>
<td>17.4</td>
<td>14.9</td>
<td>9.5</td>
<td>17.4</td>
</tr>
<tr>
<td>... Share of Annual Natural Gas Production utilised for the Petrochemical industry (%)</td>
<td>43.6</td>
<td>29.7</td>
<td>31.2</td>
<td>29.6</td>
<td>29.1</td>
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</table>
Petrochemicals: Methanol

Methanol Production and Exports (MT)

Source: Ministry of Energy and Energy Affairs
Petrochemicals: Ammonia

Ammonia Production and Exports

Source: Ministry of Energy and Energy Affairs
Petrochemical Sector

Urea Production and Exports

Source: Ministry of Energy and Energy Affairs
Factors Contributing to Downstream Diversification

• Government took on the leading role as investor – built the pipelines, the ports, the power grid and an industrial park to house a cluster of industries.

• Created a State Corporation - the National Gas Company - to facilitate the transportation of natural gas from production to the petrochemical companies and the LNG plants.

• Invited foreign direct investment and took equity participation whenever required.
• Offered subsidized gas prices (through a novel pricing formula), as well as fiscal incentives.

• Invested heavily in education and training so as to have suitably skilled manpower available and ready for investors.
Critics of the Strategy argue...

- Too much of the country’s gas resources were being utilized in primary or low value-added activities rather than in higher value-added industries e.g. into aluminum, plastics etc.
- Subsidized gas price seen as a waste of the country’s patrimony.
- Downstream industries do not reduce dependence on oil and gas. Furthermore, there is still a high degree of correlation between oil/gas prices and the prices of petrochemicals.
Benefits of Downstream Petroleum Sector

- Increases value-added and export earnings in the energy sector
- Despite the high degree of price correlation, the petrochemical sector has reduced the problem of price volatility.
- Creates opportunities for clusters and for the development of new high technology products.
5. But Limited Diversification of the Economy

- Only limited diversification, if defined as the development of dynamic non-energy tradeable sectors.

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<th>AVERAGE SECTORAL GDP GROWTH RATES (%)</th>
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<tr>
<td></td>
<td>2000-2005</td>
</tr>
<tr>
<td>Energy</td>
<td>13.5</td>
</tr>
<tr>
<td>Non-Energy</td>
<td>5.3</td>
</tr>
<tr>
<td>Agriculture</td>
<td>-4.85</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8.92</td>
</tr>
<tr>
<td>Construction</td>
<td>10.06</td>
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<td>Financial Services</td>
<td>8.55</td>
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... But Limited Economic Diversification

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<tr>
<th>SECTORAL CONTRIBUTION TO GDP (%)</th>
<th>2000</th>
<th>2003</th>
<th>2006</th>
<th>2009</th>
<th>2012</th>
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<tbody>
<tr>
<td>Energy</td>
<td>31.3</td>
<td>36</td>
<td>47</td>
<td>34.6</td>
<td>43.7</td>
</tr>
<tr>
<td>Non-Energy</td>
<td>68.7</td>
<td>64</td>
<td>53</td>
<td>65.4</td>
<td>56.3</td>
</tr>
<tr>
<td>Construction</td>
<td>7.46</td>
<td>7.3</td>
<td>7.4</td>
<td>11.3</td>
<td>5</td>
</tr>
<tr>
<td>Financial Services</td>
<td>14.22</td>
<td>12.9</td>
<td>11.51</td>
<td>11.9</td>
<td>11</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7.05</td>
<td>6.95</td>
<td>5.56</td>
<td>5.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Agriculture</td>
<td>1.36</td>
<td>0.95</td>
<td>0.57</td>
<td>0.59</td>
<td>0.57</td>
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<tbody>
<tr>
<td>Petroleum Exports</td>
<td>81.2</td>
<td>81.5</td>
<td>91.9</td>
<td>85.4</td>
<td>81.4</td>
</tr>
<tr>
<td>Other Exports</td>
<td>18.8</td>
<td>18.5</td>
<td>8.9</td>
<td>14.6</td>
<td>18.6</td>
</tr>
</tbody>
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Source: CBTT- Annual Economic Surveys
Initial Efforts to set a Platform for Diversification

- In the 1990s, following a major oil shock, the Government adopted macro-measures and structural reforms to set a platform for stabilization and broad-based growth.
- The package: fiscal restraint; exchange rate depreciation; trade and financial liberalization; privatization of public enterprises.
- Resulted in some resurgence of private investment, including in the export manufacturing sector.
However, Efforts Not-Sustained

- Expansion in light manufacturing exports to protected regional markets.
- Steady recovery of energy prices, return to pro-cyclical fiscal stance and private investment in the non-energy tradeable sector stagnated.
- Momentum for a sustained diversification effort waned as the energy sector started a new resurgence from the late 1990s.
- A comprehensive development plan (VISION 2020), prepared but not implemented.
Factors Constraining Diversification

- Pro-cyclical fiscal policy and an appreciation of the real exchange rate (negatively affected competitiveness).
- This was exacerbated by a secular decline in labour productivity.
- The expansion in government expenditures was heavy on subsidies and transfers, at the expense of public investment in infrastructure.
- High interest rate spreads and the limited availability of risk-financing constrained private investment.
Factors Constraining Diversification

Other constraints of Non- Energy Development were:
• Lack of a clearly articulated diversification strategy, with well-defined roles for the public and private sectors
• Weak public administration
• Inadequate physical and technological infrastructure
• Serious skills and competence gaps.
• Governance challenges, which is reflected in an increase in official corruption and in crime.
Some Major Diversification Issues

- Trinidad and Tobago’s position in the World Bank’s Global Competitive Survey stands at 81st of 142 countries, significantly below most other countries with similar levels of income.
- Skills gaps and low productivity are also major issues. Trinidad and Tobago ranked 110th out of 144 countries in labour market efficiency, in the above survey, which also pointed to poor work ethic as a major problem.
Diversification Issues (cont’d)

- Boom in private construction activity and major expansion in non-tradeable services, including the distributive trades.
- Sharp decline in agriculture and minimal private investment even in tourism, a sector in which Trinidad and Tobago is seen to have a major comparative advantage.
6. Addressing Lessons Learnt

- Recognizing the urgency of the diversification challenge, the Government is now redoubling efforts to develop a vibrant non-energy export sector. The new policy push includes:
  - Addressing the pro-cyclicality of fiscal policy, including through increasing savings in the Heritage and Stabilization Fund.
  - Increasing investment in human capital and infrastructure through the introduction of free tertiary education, and a nation-wide program of skills training and technical education.
Still pursuing diversification

- With the assistance of the World Bank, a comprehensive program to reduce the cost of doing business.
- Promotion of entrepreneurship and innovation through a public/private partnership program.
- Identification of target sectors; a more active role for Government via investments in IT, research, tax relief, special zones, programs to reduce production costs.
- Improving Governance (crime and public procurement).
7. Conclusion

- Resource-wealth need not be “a curse”. To make resource-wealth a blessing, countries need to develop its physical infrastructure, as well as, its human capital and governance or social capital.
- Along with sound macro policies, diversification requires active government intervention to complement market-compatible reforms.
- As Chile has demonstrated, industry need not be the only focus. Through new knowledge, the agricultural sector could also lead the diversification effort.
• Thank You