

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

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

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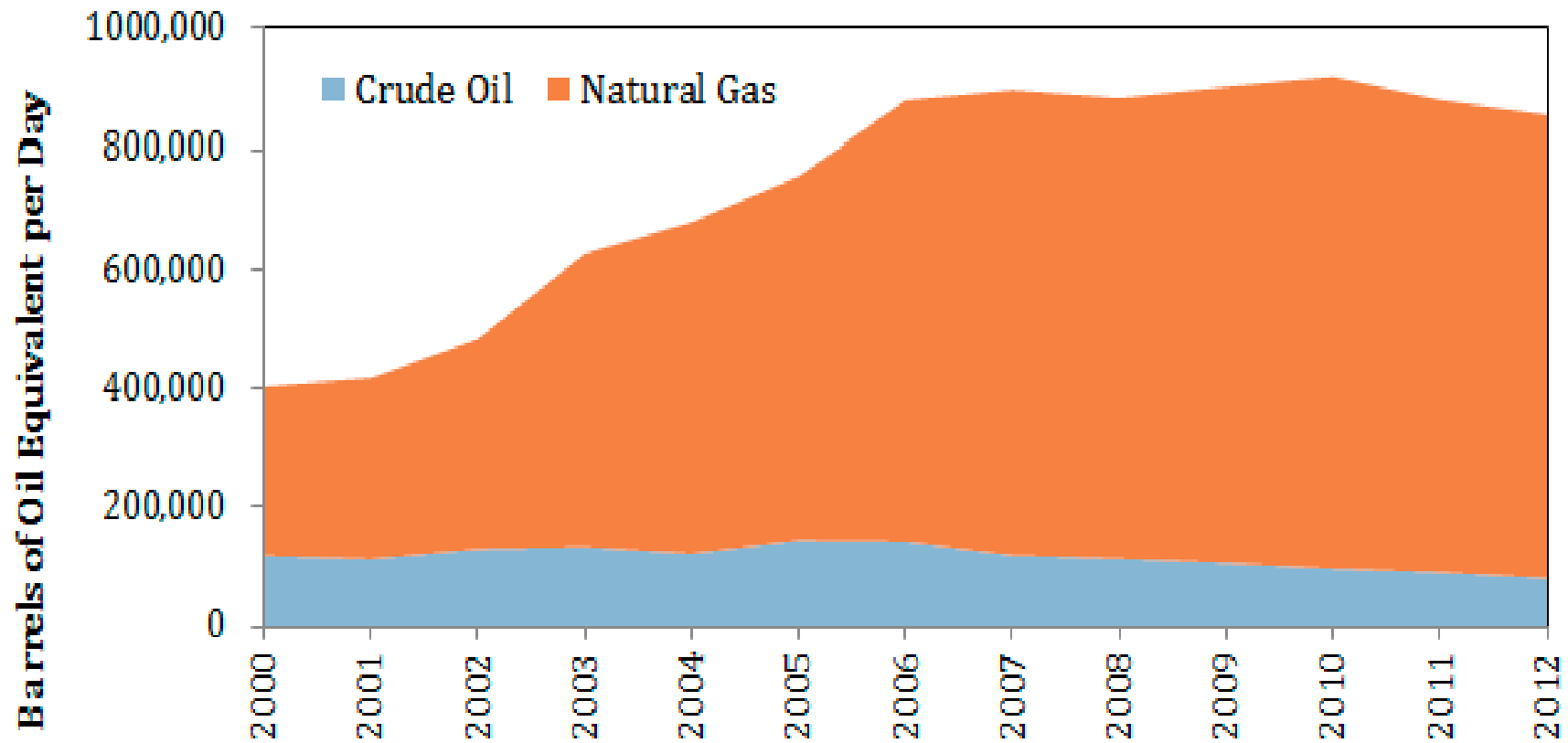
# Outline

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# 1. Basic Facts about Trinidad and Tobago

- Small country (approximately 5,128 km<sup>2</sup>)- 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



## 2. Background: Contribution of the Energy Sector

<b><u>ENERGY SECTOR</u></b>	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2012</b>
<b>... Share of Total GDP (%)</b>	<b>31.3</b>	<b>36</b>	<b>47</b>	<b>37.1</b>	<b>43.7</b>
<b>... Share of Government revenue (%)</b>	<b>30.2</b>	<b>42.8</b>	<b>61.9</b>	<b>49.5</b>	<b>54.3</b>
<b>... Share of total exports (%)</b>	<b>81.2</b>	<b>81.5</b>	<b>91.1</b>	<b>85.4</b>	<b>81.4</b>
<b>... Share of total Employment (%)</b>	<b>3.2</b>	<b>3.2</b>	<b>3.5</b>	<b>3.3</b>	<b>3.5</b>

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.

	2000	2003	2006	2009	2012
GDP Per Capita (Current US \$)	6,430.9	8751.6	14,162.8	14557.0	17,934.1
Official Reserves (\$ US Million)	1,405.5	2,257.8	6,530.8	8,651.6	9,200.7
Human Development Index (value)	.805	.801	.833		.760
	2008	2009	2010	2011	2012
Heritage and Stabilisation Fund (US \$Mn)	2,888	2,965	3,622	4,084	4,712.4

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

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

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

<sup>1/</sup> 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

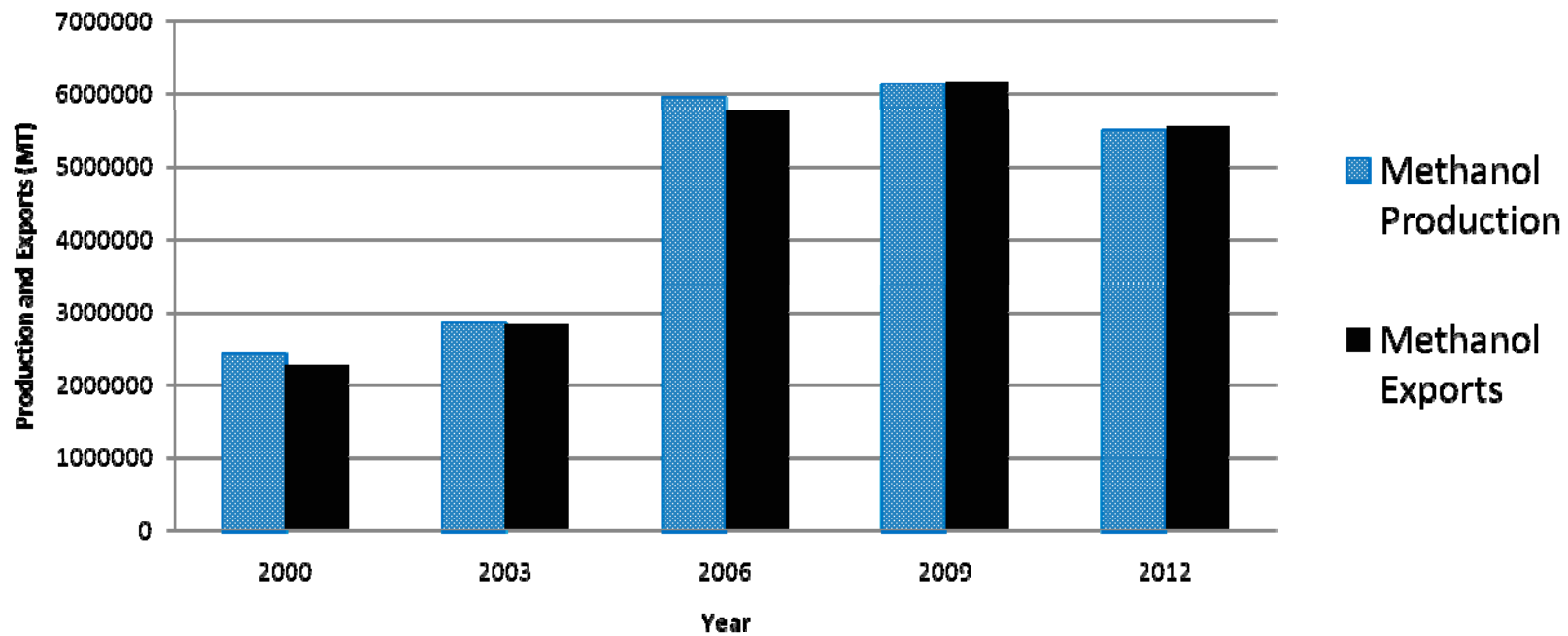
## 4. Downstream Diversification

- 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

<b>PETROCHEMICAL SECTOR</b>	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2012</b>
<b>... Share of GDP (%)</b>	<b>4.3</b>	<b>4.6</b>	<b>7.2</b>	<b>6.8</b>	<b>8.7</b>
<b>... Share of Total Exports (%)</b>	<b>17.3</b>	<b>17.4</b>	<b>14.9</b>	<b>9.5</b>	<b>17.4</b>
<b>... Share of Annual Natural Gas Production utilised for the Petrochemical industry (%)</b>	<b>43.6</b>	<b>29.7</b>	<b>31.2</b>	<b>29.6</b>	<b>29.1</b>

# Petrochemicals: Methanol

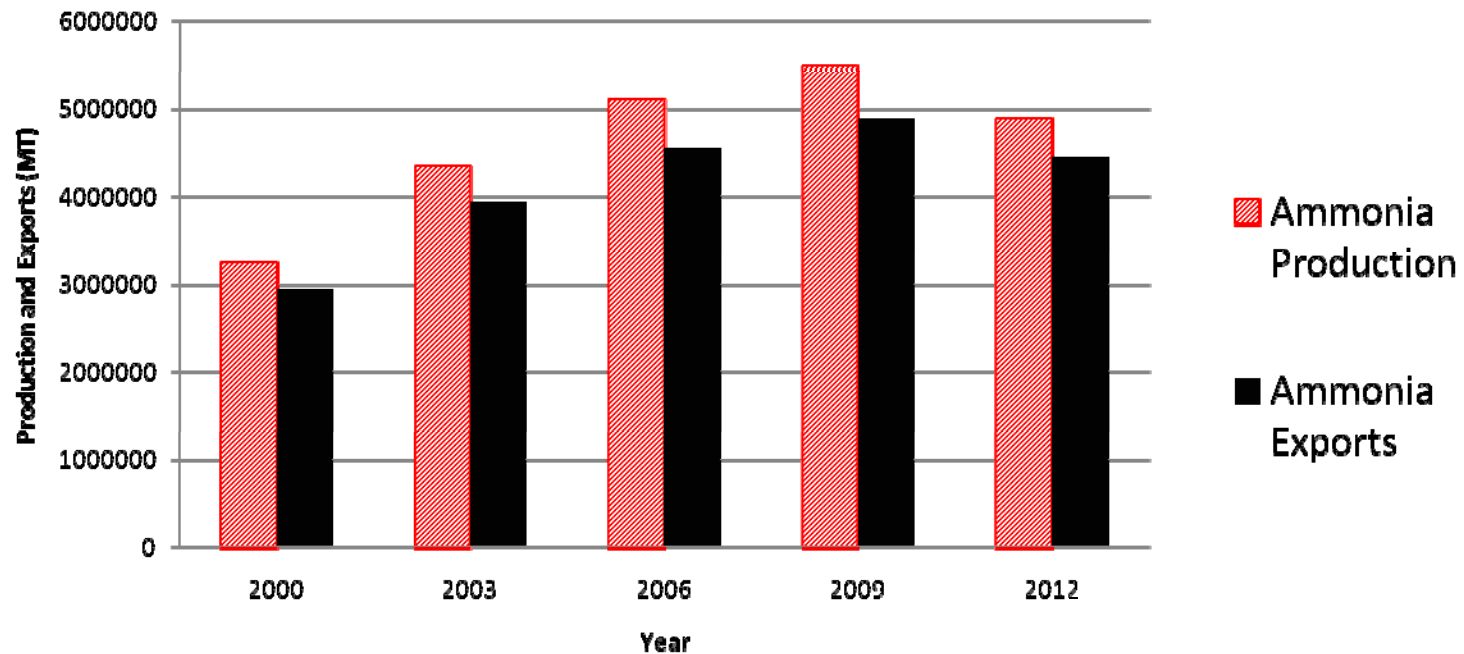
## Methanol Production and Exports (MT)



Source: Ministry of Energy and Energy Affairs

# Petrochemicals: Ammonia

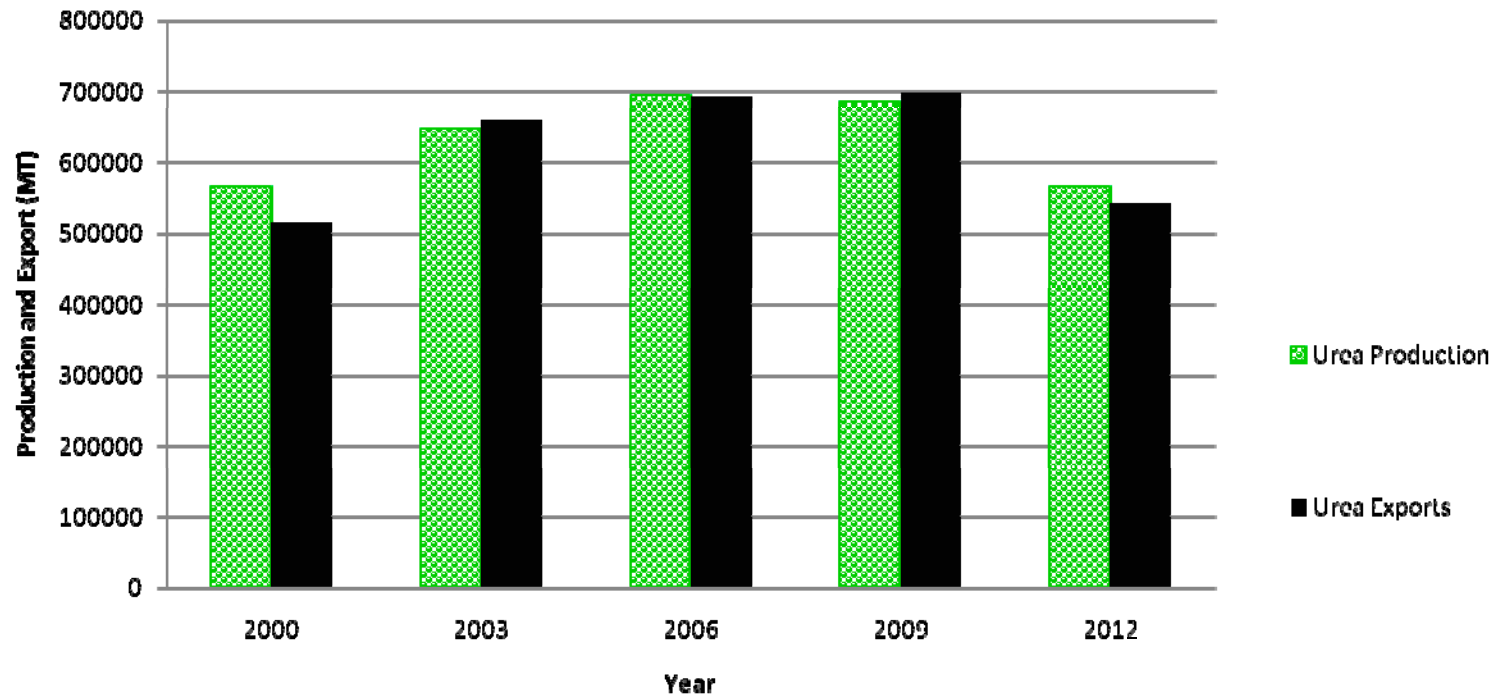
## Ammonia Production and Exports



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.

# Downstream Diversification(cont'd)

- 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.

AVERAGE SECTORAL GDP GROWTH RATES (%)		
	2000-2005	2006-2011
Energy	13.5	3.45
Non- Energy	5.3	2.08
Agriculture	-4.85	30.51
Manufacturing	8.92	5.98
Construction	10.06	-4.42
Financial Services	8.55	2.92

## ... But Limited Economic Diversification

<b>SECTORAL CONTRIBUTION TO GDP (%)</b>					
	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2012</b>
<b>Energy</b>	<b>31.3</b>	<b>36</b>	<b>47</b>	<b>34.6</b>	<b>43.7</b>
<b>Non- Energy</b>	<b>68.7</b>	<b>64</b>	<b>53</b>	<b>65.4</b>	<b>56.3</b>
<b>Construction</b>	<b>7.46</b>	<b>7.3</b>	<b>7.4</b>	<b>11.3</b>	<b>5</b>
<b>Financial Services</b>	<b>14.22</b>	<b>12.9</b>	<b>11.51</b>	<b>11.9</b>	<b>11</b>
<b>Manufacturing</b>	<b>7.05</b>	<b>6.95</b>	<b>5.56</b>	<b>5.8</b>	<b>6.0</b>
<b>Agriculture</b>	<b>1.36</b>	<b>0.95</b>	<b>0.57</b>	<b>0.59</b>	<b>0.57</b>

<b>Sectoral Contribution of Exports (%)</b>					
	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2012</b>
<b>Petroleum Exports</b>	<b>81.2</b>	<b>81.5</b>	<b>91.9</b>	<b>85.4</b>	<b>81.4</b>
<b>Other Exports</b>	<b>18.8</b>	<b>18.5</b>	<b>8.9</b>	<b>14.6</b>	<b>18.6</b>

Source: CBTT- Annual Economic Surveys

## Initial Efforts to set a Platform for Diversification

- In the 1990s, following a major oil shock 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 81<sup>st</sup> 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 110<sup>th</sup> 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)

- Between 1998-2005, FDI of US\$ 350 million per annum, almost all concentrated in energy sector
- 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**