

Annex VI - Case Study - Trinidad & Tobago

Contents

VI.1. General description and basic economy	1
VI.2. Nature of aviation and shipping industries	3
VI.2.1 Civil Aviation	3
VI.2.2 Shipping	4
VI.3. Trade and Tourism	5
VI.3.1 Imported goods	9
VI.3.2 Merchandise Imports	10
VI.4. Key Demographics And Dependencies On Certain Goods	13
VI.5. Impacts of Future Changes in Imports, Exports and Tourism	14
VI.6. Planned Port Expansions	15
VI.7. Modelling results	15
VI.8. List of 'similar' countries	16

VI.1. General description and basic economy

The Republic of Trinidad and Tobago is a archipelagic state comprising two main islands in the southern Caribbean, just off the coast of north-eastern Venezuela. It shares maritime boundaries with Barbados to the northeast, Guyana to the southeast, and Venezuela to the south and west.

The total land mass of the country is 5,128 km². Trinidad is the larger and more populous of the main islands, comprising about 94% of the total area and 96% of the total population.

The population is currently around 1.2m and shrinking at an estimated rate of 0.086% p/a in 2012. The main ethnic groups are Indian (South Asian) at around 40% of the population; African at 38%; with 21% mixed ethnicities. The country is religiously diverse with 58% Christian denominations, 23% Hindu and 6% Muslim. It is one of the richest countries in the Caribbean.¹ In 2011, Trinidad & Tobago's Human Development Index score was 0.760, ranked 62nd in the world. The OECD has recently removed Trinidad and Tobago from its list of Developing Countries.

Trinidad & Tobago's economy grew at very high rates from 1998 to 2006, posting GDP growth of 14% in 2003 and 13% in 2006. Since then however, growth rates have reduced dramatically, and from 2009 onwards the economy has shrunk each year (-1.4% in 2011). GDP stood at \$22,483m in 2011 or \$34,939 once adjusted for purchasing power.² A recent IMF assessment suggests economic growth will recommence in 2012.³

An important reason for the high levels of growth achieved in the past has been the country's exploitation and export of oil, and more recently, natural gas. The energy sector accounts for around 40% of GDP, and the majority of exports, but only 5% of

¹ CIA World Factbook, *Trinidad & Tobago* - <https://www.cia.gov/library/publications/the-world-factbook/geos/td.html>

² World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

³ IMF - <http://www.imf.org/external/np/sec/pr/2012/pr1244.htm>

employment.⁴ Production of oil has decreased significantly over time, having halved from 212,057 barrels of oil per day (bopd) in 1980 to 107,169 bopd in 2009. Conversely, gas production production has increased by around 25% from 3,219 million cubic feet per day (mcfpd) in 2005 to around 4,200 mcfpd in 2009.⁵

Thus Trinidad & Tobago has the features of a ‘dual-economy’, where the energy sector grows strongly but with benefits not spilling over to the rest of the economy, which lags behind. In 2007 the Government launched the ‘Vision 2020’ economic development plan to reduce dependency on the energy sector by transforming the economy using revenues from oil and gas to strengthen non-energy financial, export, tourism and agriculture sectors.⁶

In 2010, 52% of Trinidad & Tobago’s GDP was contributed by Industry. This includes the exploitation and export of fuels (much of which goes to North American markets), as well as production of ammonia and methanol. Services contributed 47% of GDP and 64% of employment. This includes financial services, for which the country is a regional centre, and tourism.⁷ Exports exceed imports and the country has a growing trade surplus.

⁴ Inter American Development Bank report (2007) -

<http://sta.uwi.edu/salises/pubs/workingpapers/16.pdf>

⁵ The Energy Chamber of Trinidad & Tobago -

http://www.energy.tt/index.php?categoryid=259&p2_articleid=25

⁶ Vision 2020 - http://www.meetmanning.com/home/pdf/vision_2020_operational_plan_2007-2010.pdf

⁷ World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

VI.2. Nature of aviation and shipping industries

VI.2.1 Civil Aviation

Airports

Trinidad & Tobago has 2 international airports: ⁸

Piarco International Airport (TTPP) - in the north of Trinidad, about 25km from the Capital, Port of Spain - is the country's main airport. It has recently undergone major improvements with the construction of a new North Terminal with 29 new gates to accommodate increased traffic. The old terminal, now the South terminal, has been upgraded to a cargo facility and for VIP flights. The airport has now been cleared for category 1 status by the US Federal Aviation Authority.

A.N.R. Robinson International Airport (TTCP) - formally known as Crown Point International Airport - is a small informal airport on the south western tip of the island of Tobago, 11km from the main town of Scarborough. It is critical to the island's tourist economy. Improvement works are planned, including an extension to the terminal building and works to the runway.

Air Freight

Air transport of freight (measured by metric tonne kms) increased year on year from 34m t/km in 2003 to 70m t/km in 2009 but, according to ICAO/World Bank, dropped to 13m t/km in 2010. ⁹

Air Passengers

In 2010, *for air carriers registered in Trinidad & Tobago*, the total number of passengers travelling within, to, or from Trinidad & Tobago was 1,720,796, compared to 807,500 in 1997. ¹⁰

However once all flights are taken into account, the number of air passengers travelling within, to, or from Trinidad & Tobago, is far larger: ¹¹

Trinidad's TTPP airport recorded 2,504,469 passengers in 2010 (including 253,325 in transit)

Tobago's TTCP airport recorded 739,622 passengers in 2010 (40,313 in transit)

Total in 2010: 3,244,091 passengers (including 293,638 in transit)

Carriers & Fleets

Table VI.1 below gives a summary of all currently operating international, domestic, passenger and cargo, air carriers & fleets *registered in Trinidad & Tobago* ¹² (note: more carriers than this operate flights to and from Trinidad & Tobago, e.g. British Airways, American Airlines):

⁸ Trinidad & Tobago Airport Authority - <http://www.tntairports.com/aatt/index.html>

⁹ ICAO data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

¹⁰ ICAO data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

¹¹ Trinidad & Tobago Airport Authority - <http://www.tntairports.com/piarco/stats.html>

¹² Sources: <http://newsday.co.tt/businessday/0.166831.html>; http://en.wikipedia.org/wiki/Caribbean_Airlines;

Table VI.1 T&T Airline fleets

Registered Carrier	Current Fleet	Average aircraft age	Future additions
Caribbean Airlines	4 x ATR 72-600 (replacing the Dash-8 Q300's) 16 x Boeing 737-800 1 x Boeing 767-200F 2 x Boeing 767-300ER 5 x Bombardier Dash-8 Q300 (retiring 2013)	?	1 x ATR 72-600

VI.2.2 Shipping

Merchant Fleet

According to UNCTAD statistics, the number of ships in Trinidad & Tobago's merchant fleet (those registered in the country and authorised to navigate at sea) was 21 in 2012 - 4 oil tankers and 17 'other' (i.e. not oil tankers, bulk carriers, cargo, or container ships).¹³

Container Traffic

However the total amount of container traffic that moves through Trinidad & Tobago's ports from ships of any country's merchant fleet (for both international journeys and domestic shipping) has increased from 282,487 TEUs in 2007 to 573,217 TEUs in 2010 (a TEU is a measure of standard-size 'twenty foot equivalent' container unit).¹⁴

Ports

Port of Spain^{15 16}

Trinidad & Tobago's main port, run by the Port Authority of Trinidad and Tobago, is in the capital of the country, Port of Spain. It is capable of accommodating the following cargoes: containerised, break bulk, dry bulk, liquid bulk, ro-ro, LCL and barrels. The port also has cruise ship facilities and inter-island ferries. In 2010 it handled 388,960 TEUs - 68% of Trinidad & Tobago's total cargo handling for that year.

It has 8 main berths - 2 as part of the container terminal (draft of 12m and length up to 180m); 2 for passengers and general cargo (draft of up to 10m and length up to 152m); 2 for the company Hyatt; and 2 for the company Tate and Lyle. The

¹³ <http://unctadstat.unctad.org/TableViewer/tableView.aspx?ReportId=93>

¹⁴ Data from the Containerisation International Yearbook via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

¹⁵ Port Authority of Trinidad & Tobago - http://www.patnt.com/cargo_handling.php?mid=39

¹⁶ <http://www.newsday.co.tt/news/0,160888.html>

maximum size of ship that can be accommodated is: LOA 245m (single-screw cargo vessels) or 265m (twin-screw high manoeuvrable vessels) at berth with dredged dept alongside at - 12 metre CD. `

A current improvement programme includes a new computerised operating system and new container handling machinery. The aim is to increase the port's capacity from 380,000 TEUs to 800,000 TEUs by 2014.

*Point Lisas*¹⁷

The multi-purpose cargo port as Point Lisas is the country's second port and lies on west coast of Trinidad, 32km south of Port of Spain in the Gulf of Paria. It is owned and run by a public company, Point Lisas Industrial Port Development Corporation Limited (PLIPDECO) (51% Government share). The port caters for containerised cargo from the US, Europe, and the far east. It has 6 commercial berths to handle dry and liquid bulks, containers, general cargo and break bulk.

In 2008 it handled 157,000 TEUs, 15% of Trinidad & Tobago's total cargo handling for that year.

*Point Fortin*¹⁸

Previously used for the export of oil, Point Fortin on the south western coast of Trinidad, now has the country's first LNG export terminal. It can accommodate LNG tankers ranging from 70,000 to 135,000 cubic meters in size; Maximum LOA 213m, draft 10.97m.

*Galeota Point Terminal*¹⁹

The 'energy' port at Galeota Point at the south-eastern tip of Trinidad is currently being rebuilt/upgraded to support the exploration and exploitation of Trinidad & Tobago's oil and gas industry, as well as provide new fish storage facilities. It will include a new 529m quay with 5 berths, and deeper drafts (12.8m) to accommodate larger Panamax rated ships.

*Scarborough*²⁰

This small port on the southern coast of Tobago has a deep-port cruise ferry terminal, cargo handling piers and an oil terminal.

VI.3. Trade and Tourism

The value of Trinidad & Tobago's goods and services exports was \$12,113m in 2010. Although this was an increase on 2009 (\$9,986m) it was still well below 2008 pre-financial crisis levels(\$19,583m). Of these exports, almost all were merchandise/goods (\$10,981m in 2010) with only a very small proportion commercial services (\$869m).

¹⁷ PLIPDECO - <http://www.plipdeco.com/main/index.php?page=port-operations-overview>

¹⁸ Intercontinental Shipping Ltd - http://www.icsl.co.tt/ports_Point_Fortin.htm

¹⁹ National Energy Corporation of Trinidad & Tobago -

<http://www.nec.co.tt/AboutUs/WhoWeAre/EstateandPortDevelopment/GaleotaPortProject.aspx>

²⁰ http://www.searates.com/port/scarborough_tt.htm

In 2008 exports contributed 64% of GDP, down from a peak of 69% in 2006.²¹

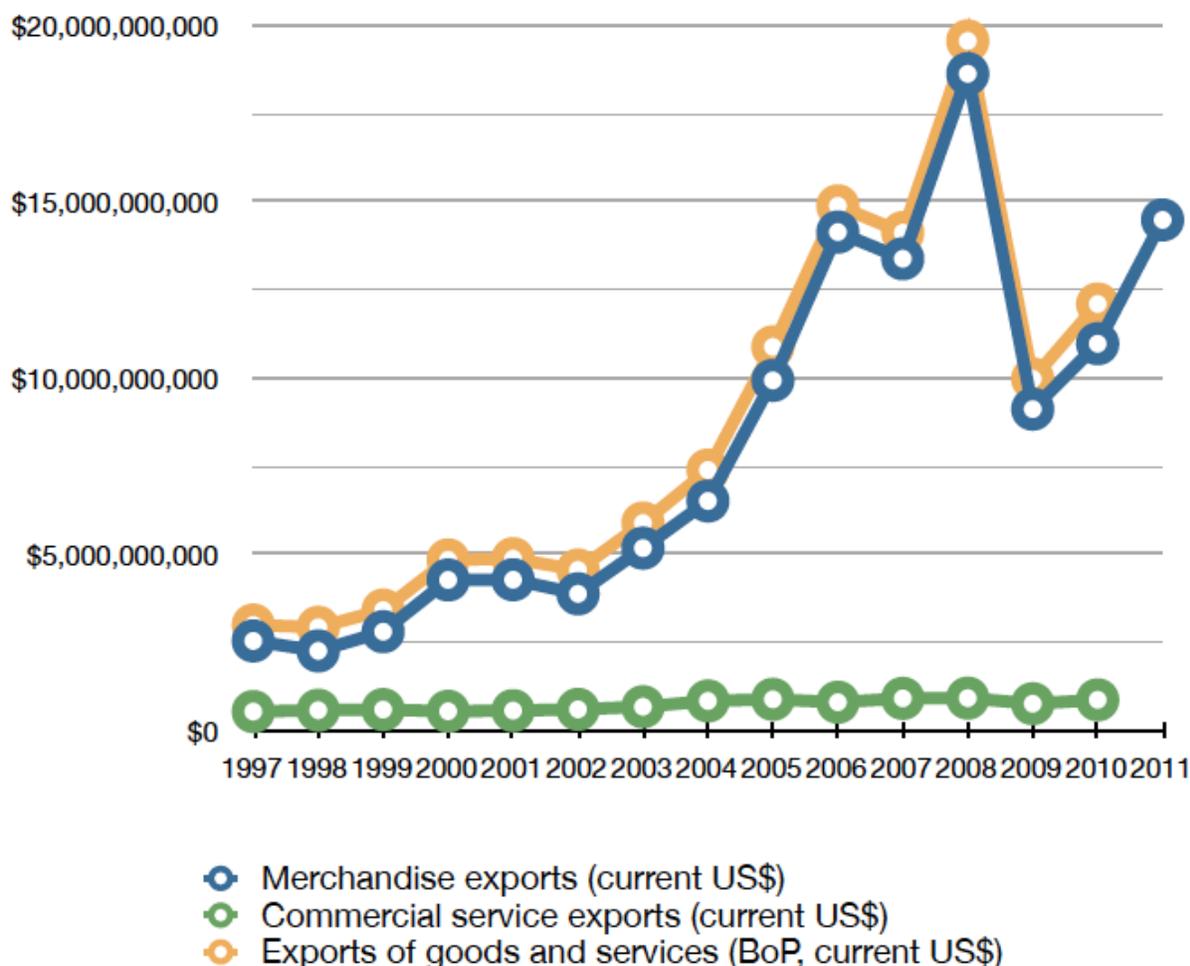


Figure 1 Value of Trinidad & Tobago’s exports (1997-2011)²²

Merchandise exports

The chart below shows Trinidad & Tobago’s most important merchandise export categories. In 2010, 66% of all merchandise exports were fuel exports (lower than the 79% in 2009), and 31% were manufacturing products (over double the proportion

²¹ World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

²² IMF data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

in 2009 - 15%). Food exports have declined over time from 11% in 1998 to 3% in 2010.

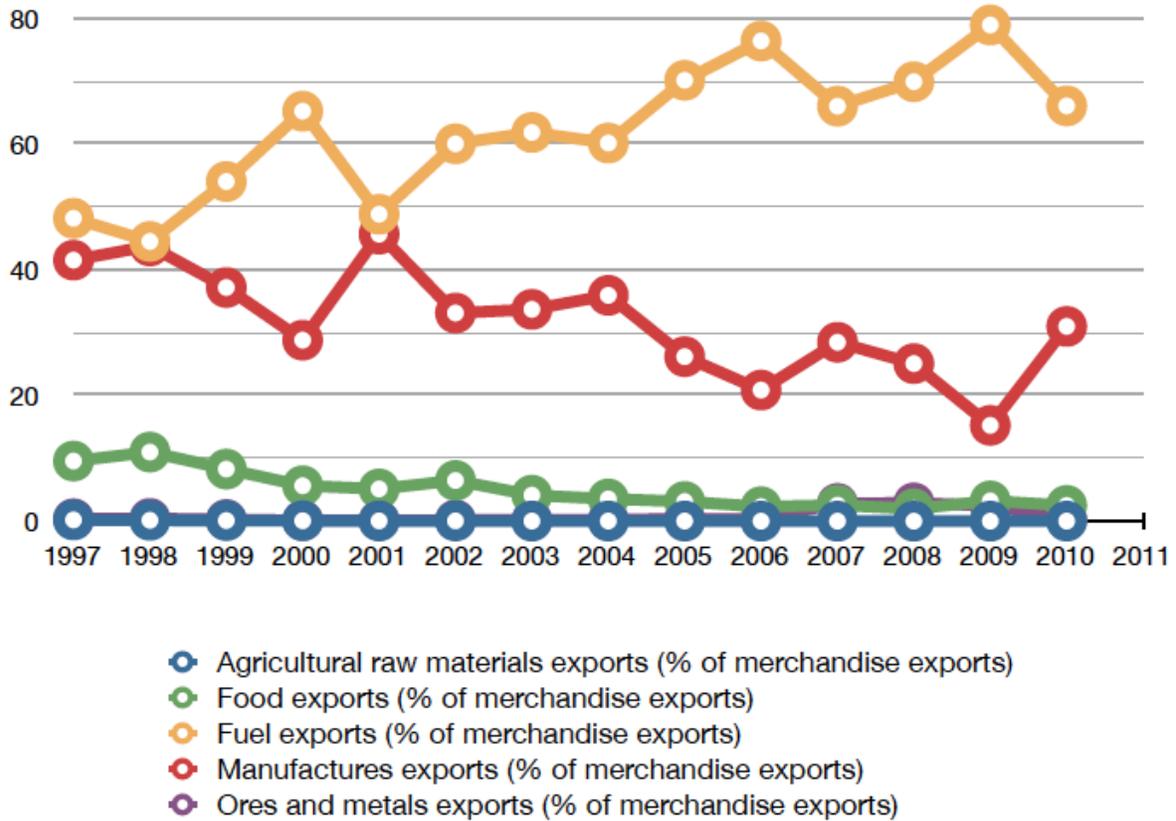


Figure 2 Trinidad & Tobago's merchandise exports by category - % of total (1997-2010)²³

More specifically, Trinidad & Tobago's main energy-related merchandise export products are: petrol, petrol products and liquified natural gas (together these are easily the biggest export category with a value of \$6,687m in 2010, up 465% from 1997). The main non energy-related exports were chemicals, particularly ammonia and methanol; steel products; and ores, slags and ash (mainly scrap metals) - which has shown tremendous growth from nothing in 1997.²⁴ UN Comtrade data for Trinidad & Tobago's 10 most valuable merchandise export categories (2010) is shown in Table 2 below.

²³ UN COMTRADE data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

²⁴ CIA World Factbook, *Trinidad & Tobago* - <https://www.cia.gov/library/publications/the-world-factbook/geos/td.html>

Table 2 Trinidad & Tobago's top 10 merchandise exports (1997-2010)²⁵

	Commodity	1997	2005	2010	% change 1997- 2010	% change 2005- 2010
1	Mineral fuels, oils and products of their distillation (code: 27)	\$1,183,126,912	\$6,751,960,457	\$6,686,936,115	465%	-1%
2	Inorganic chemicals, precious metal compound, isotope (code: 28)	\$281,030,016	\$888,174,207	\$1,467,742,518	422%	65%
3	Organic chemicals (code: 29)	\$204,344,464	\$709,650,800	\$636,425,308	211%	-10%
4	Iron and steel (code: 72)	\$239,182,400	\$332,281,180	\$569,994,930	138%	72%
5	Ores, slag and ash (code: 26)	\$82	\$25,228,046	\$533,196,585	650m%	2,014%
6	Ships, boats and other floating structures (code: 89)	\$26,022,816	\$19,122,512	\$257,394,007	889%	1,246%
7	Fertilisers (code: 31)	\$85,364,928	\$144,421,144	\$218,662,720	156%	51%
8	Beverages, spirits, vinegar (code: 22)	\$72,000,456	\$122,435,065	\$95,699,712	33%	-22%
9	Nuclear reactors, boilers, machinery, mech. appliances (code: 84)	\$58,054,200	\$81,807,097	\$57,418,626	-1%	-30%
10	Paper & paperboard, articles of pulp, paper and board (code: 48)	\$45,832,820	\$61,519,645	\$51,496,009	12%	-16%

Export Destinations

The destinations for virtually all Trinidad & Tobago's merchandise exports are: ²⁶ High-income economies (a World Bank category that covers North America, much of Europe, Japan, Australia, New Zealand and Saudi Arabia) - 69% in 2010, down from a high of 80% in 2004. Developing countries in Latin America and the Caribbean - 28% in 2010, up from 19% in 2003.

More specifically, Trinidad & Tobago's main export partners in 2011 were the USA (destination for 43.7% exports), Spain (5.1%), South Korea (4.8%) and Jamaica (4.7%).²⁷ In 2005, 85% of the country's LNG exports went to the USA.²⁸

Tourism & Foreign Visitors

In 2010, the total number of 'stay-over' visitors (those who stay at least 24 hours) to Trinidad & Tobago was 387,559. Of this, 46% (176,271) were tourists and a further 25% (97,750) were visiting friends and relatives. The overall number of 'stay-over' visitors has reduced year on year from 2005 (when 463,190 visitors were recorded). Declines have been more significant on Tobago (particularly in leisure visitors) than

²⁵ UN COMTRADE

²⁶ IMF data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

²⁷ CIA World Factbook, *Trinidad & Tobago* - <https://www.cia.gov/library/publications/the-world-factbook/geos/td.html>

²⁸ <http://www.lngworldnews.com/trinidad-and-tobago-lng-exports-to-u-s-down/>

Trinidad. The main origins of these foreign visitors in 2010 were: the USA (47%), Canada (12%), and the UK (9%).²⁹

For non stay-over visitors, 2009 saw 121,712 cruise passengers arrive in Trinidad & Tobago - the highest on record. This reversed a decline that had been evident from the previous high of 104,061 passengers and 146 cruise ship calls in 2000, to 44,505 passengers and 86 cruise ship calls in 2008.

According to World Bank data, receipts from international tourism were \$557m in 2008, accounting for about 3% of all exports, compared to 7% in 2000 and 11% in 1997. This suggests tourism reduced in relative importance to the economy over this time.³⁰

However a 2005 report by the World Travel & Tourism Council estimated that in 2005 the direct impact of travel and tourism on the economy was 4.8% of GDP and 33,771 jobs (5.8% of all employment). Once wider indirect impacts are considered this increase to 13.8% of GDP and 96,539 jobs (16.7% of all employment). Furthermore, tourism is focussed on Tobago, and the figures specific to this island - 46% GDP and 56.8% of employment - suggest it is “one of the most tourism-intensive economies in the world”.³¹

VI.3.1 Imported goods

The value of Trinidad & Tobago’s goods and services imports was \$6,890m in 2010, down from the all time high reached in pre-financial crisis 2008 (\$9,903m). The vast majority of this was due to merchandise imports (\$6,480m) with only a very small proportion being commercial services imports (\$369m).

The ratio of goods and services Imports to overall GDP has steadily decreased over time from 57% in 1997 to 37% in 2008.³²

²⁹ Trinidad & Tobago Tourism Development Company - http://www.tdc.co.tt/arrival_statistics.htm

³⁰ World Bank Global Development Indicators- <http://databank.worldbank.org/Data/Home.aspx>

³¹ http://www.tdc.co.tt/tourism_report.htm

³² World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

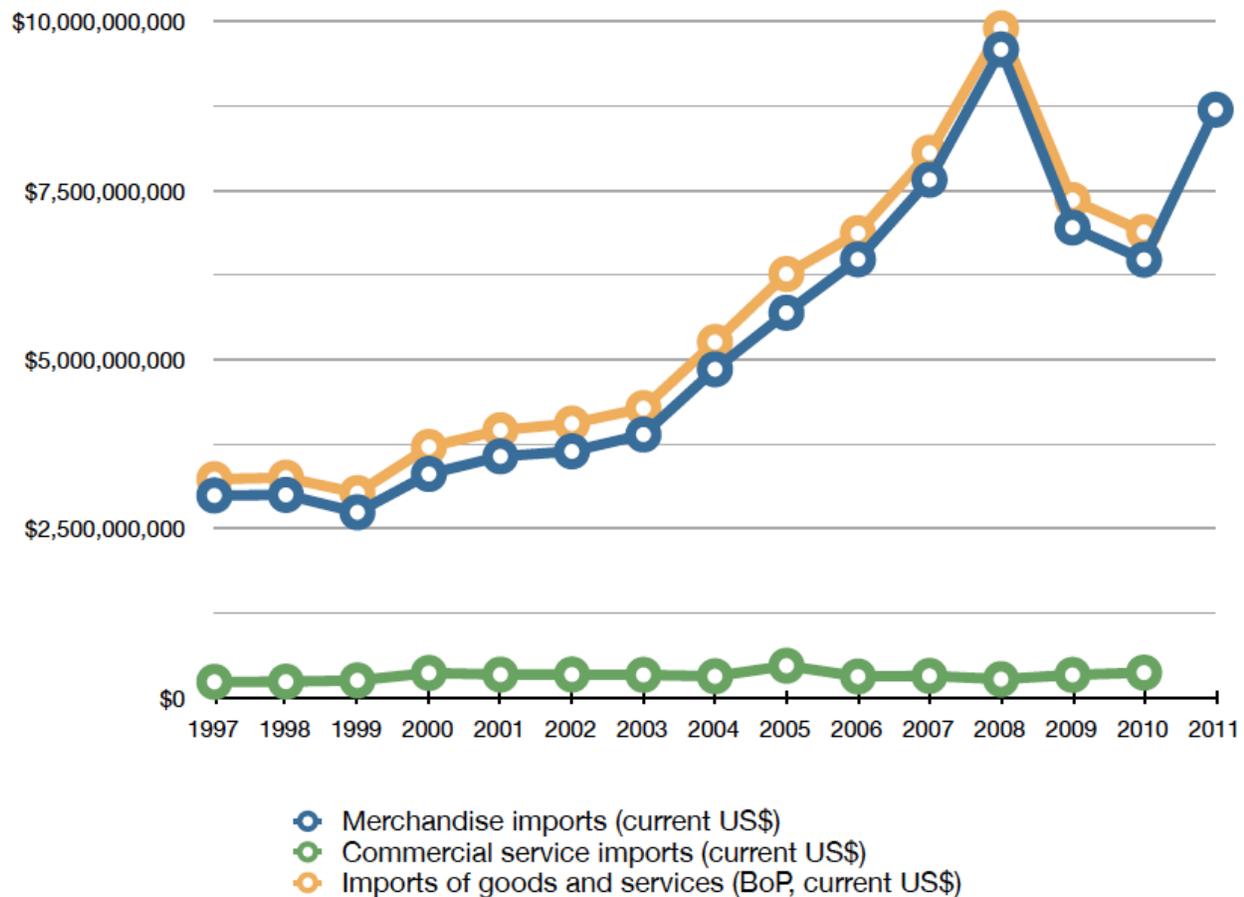


Figure 3 Value of Trinidad & Tobago’s imports (1997-2011) ³³

VI.3.2 Merchandise Imports

The chart below shows Trinidad & Tobago’s most important merchandise import categories. Although declining in importance over time, manufacturing products still made up 50% of all merchandise imports in 2010. Conversely fuel imports have increased in importance over time from 13% of all imports in 1997 to 33% in 2010, although this proportion has not changed much since 2005. Food imports have remained broadly constant over time at around 11% of all imports.

³³ IMF data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

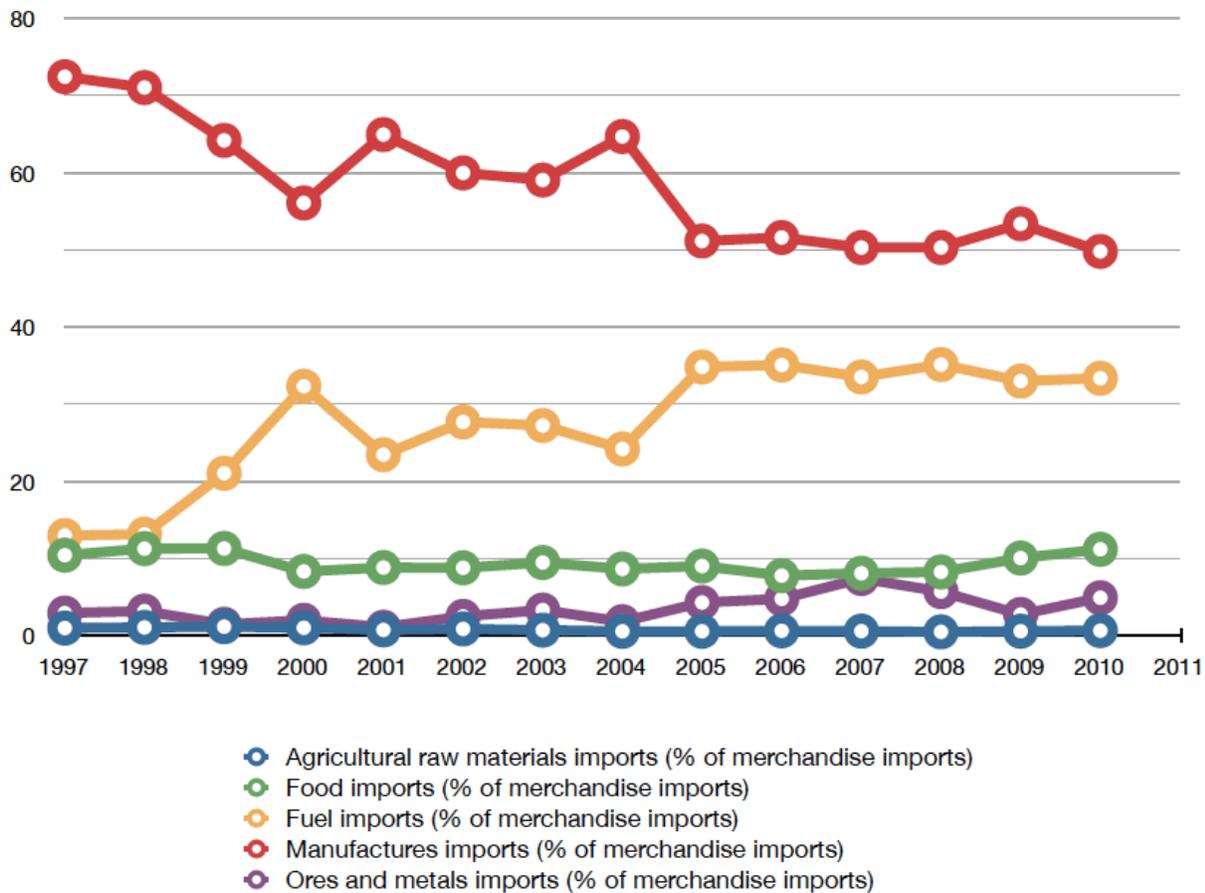


Figure 4 Trinidad & Tobago's merchandise imports by category - % of total (1997-2010)³⁴

More specifically, mineral (fossil) fuels and oils to the value of \$2,158m were imported in 2010 (almost all of which is petrol), up over 400% from 1997. This trend is compatible with the decline in domestic oil production over this period, and the economy's transition to being more focussed on LNG than oil. In terms of non energy-related imports, machinery and electrical equipment are the top imports. UN Comtrade data for Trinidad & Tobago's 10 most valuable merchandise import product categories (2010) is shown in Table 3 below.

Table 3 Trinidad & Tobago's top 10 merchandise import product categories (1997-2010)³⁵

	Commodity	1997	2005	2010	% change 1997-2010	% change 2005-2010
1	Mineral fuels, oils and products of their distillation (code: 27)	\$396,499,968	\$1,981,503,843	\$2,157,726,650	444%	9%
2	Nuclear reactors, boilers, machinery, mech. appliances (code: 84)	\$1,042,695,104	\$867,212,422	\$747,274,535	-28%	-14%

³⁴ UN COMTRADE data via World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

³⁵ UN COMTRADE

	Commodity	1997	2005	2010	% change 1997-2010	% change 2005-2010
3	Electrical machinery, equipment, parts; sound & television recorders and reproducers (code: 85)	\$132,505,024	\$281,285,753	\$347,205,208	162%	23%
4	Vehicles other than railway or tramway rolling-stock, and parts (code: 87)	\$144,471,792	\$320,194,914	\$321,572,527	123%	0%
5	Ores, slag and ash (code: 26)	\$49,831,912	\$195,893,215	\$256,479,574	415%	31%
6	Articles of iron or steel (code: 73)	\$130,506,648	\$219,239,178	\$206,218,967	58%	-6%
7	Plastics and articles thereof (code: 39)	\$91,180,824	\$157,242,082	\$178,180,659	95%	13%
8	Ships, boats and other floating structures (code: 89)	\$66,787,288	\$6,627,468	\$144,021,278	116%	2,073%
9	Iron and steel (code: 72)	\$49,848,600	\$110,459,167	\$137,872,666	177%	25%
10	Miscellaneous chemical products (code: 38)	\$56,089,496	\$95,991,647	\$119,097,880	112%	24%

Import Origin

The main origins for Trinidad and Tobago's merchandise imports are: ³⁶

High income economies - 60% of all merchandise imports in 2010

Developing economies in Latin America and the Caribbean - 21% in 2010

Developing economies in East Asia and the Pacific - 7% in 2010, up from 3% in 2005

More specifically, Trinidad and Tobago's main import partners in 2011 were the USA (origin of 33% of all merchandise imports), Brazil (11%), Russia (6%), Gabon (6%, and over a third of Trinidad & Tobago's fossil fuel imports), Canada (5%) and China (4%).³⁷

³⁶ IMF data from World Bank Global Development Indicators -

<http://databank.worldbank.org/Data/Home.aspx>

³⁷ CIA World Factbook, *Trinidad & Tobago* - <https://www.cia.gov/library/publications/the-world-factbook/geos/td.html>

VI.4. Key Demographics And Dependencies On Certain Goods

The population of Trinidad & Tobago is 1.2million (ranked 158th in the world) and shrinking at an estimated 0.1% in 2012. One fifth of the population are under the age of 14, with 72% being between 15-64 years old.³⁸

Poverty & Inequality³⁹

Trinidad & Tobago is one of the wealthiest countries in the Caribbean. In 2010 the per capita GDP was \$22,761 in 2011 (adjusted for purchasing power; calculated at 2005 \$ values), although this has fallen from \$24,151 in 2008.

The oil boom of the 1970s helped reduce poverty in Trinidad & Tobago, however by the 1990s it was *increasing* again with unemployment rising, incomes falling, and approximately 21% of the population falling below the national poverty line. Particularly badly hit were the unemployed, those with low levels of education, and larger households. Poverty was evenly spread between rural and urban areas⁴⁰ By 2007, the proportion living below the national poverty line was estimated to have been reduced to 17%.⁴¹

From the 1950s to 1972, the Gini coefficient increased from 0.43 to 0.51. However since then the coefficient has steadily decreased up to 1998 and has remained constant for the most recent period to 2005 (at around 0.39). This indicates that the level of inequality in Trinidad and Tobago decreased over time then remained steady in the early 2000s.⁴²

Employment⁴³

Employment levels have increased over the period 1997 to 2010, from 66% to 71% of the total population aged 15-64. Employment levels for young people aged 15-24 are much lower, but still rose from 38% to 48% over the same period. Employment is significantly higher amongst men than women, both across the population as a whole and for young people.

In 2008 well over half of all employment was in the service sector (64%) - a level that has remained steady since 1997. 32% of employment was in industry, up from 26% in 1997. Only 4% of employment was in agriculture, down from 10% in 1997.

Tourism employment

³⁸ CIA World Factbook, *Trinidad & Tobago* - <https://www.cia.gov/library/publications/the-world-factbook/geos/td.html>

³⁹ World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx>

⁴⁰ World Bank Poverty Assessment (1995)
<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPA/0,,contentMDK:20208442~menuPK:443285~pagePK:148956~piPK:216618~theSitePK:430367,00.html>

⁴¹ CIA World Factbook, *Trinidad & Tobago* - <https://www.cia.gov/library/publications/the-world-factbook/geos/td.html>

⁴² Indufor report for the UN (2010)
http://www.un.org/esa/forests/pdf/ahég/ahég1/Trinidad_Tobago.pdf

⁴³ ILO data via World Bank Global Development Indicators -
<http://databank.worldbank.org/Data/Home.aspx>

As described above, a 2005 report by the World Travel & Tourism Council estimated that 33,771 jobs were directly attributable to tourism (5.8% of all employment), and 96,539 jobs once wider indirect impacts are taken into account (16.7% of all employment).

Child Labour

The World Bank data set suggests 3.4% of children aged 7-14 were 'economically active' in 2008 (refers to at least 1 hour of economic activity per week), marginally down from 3.9% in 2000.

VI.5. Impacts of Future Changes in Imports, Exports and Tourism

If the cost of aviation and shipping were to increase as a result of market based measures (MBMs) to reduce emissions, a number of possible implications can be drawn for the Trinidad & Tobago economy and people based on the case-study data presented above. These implications assume no mitigation measures are put in place.

Exports

- Exports are critically important to the economy of Trinidad and Tobago, contributing over half of GDP. Almost all of these are physical merchandise - including oil, petroleum products, LNG, chemicals and steel. These are transported by international shipping to destinations in North and South America. (The UN estimates around 90% of world cargo is transported by sea⁴⁴)
- Thus MBMs which increase the cost of shipping could increase prices to importers and decrease demand. In turn, this could negatively impact on a key part of the Trinidad & Tobago economy by reducing foreign currency income, and threatening jobs in export sectors.
- However these effects are highly speculative. Firstly, these export destinations are relatively close by global standards and so it is possible Trinidad & Tobago's exports will become more attractive compared to competition from more distant countries. Secondly, it is possible that wider changes will have a much greater impact on these parts of the Trinidad & Tobago export and energy economy than MBMs. For example the USA - which in 2005 imported 85% of the Trinidad & Tobago's LNG - is now forecast to become a net exporter of natural gas by 2016.⁴⁵

Tourism

- Although tourism is a relatively small part of the economy compared to other Caribbean states, it nonetheless supports between 6-17% of the country's employment. In particular, the tourism is a critical part of Tobago's economy. Most tourists come from North America, with a significant minority from Europe. Most of these will arrive by plane, although the country is also a destination for cruise visitors too.
- An increase in the cost of flying and cruising due to MBMs could act as a downward pressure on tourism, thus risking negative impacts on both foreign currency income and employment, particularly on the island of Tobago.

⁴⁴ UNCTAD 2011 Review of Maritime Transport

⁴⁵ <http://www.forbes.com/sites/energysource/2012/06/13/the-u-s-has-a-natural-gas-glut-why-exporting-it-as-lng-is-a-good-idea/>

Imports

- Almost all of Trinidad & Tobago's imports are merchandise goods. Most of these are manufacturing goods from high income economies, particularly North America, and increasingly China. Fuel imports (oil) are increasing, much of which comes from Africa. Food is also an important import. Apart from some perishable goods, almost all of these are likely to be transported by international shipping.
- Thus MBMs could provide an upward pressure on prices for some of the basic essentials for life - food and fuel. This is likely to affect all people but could disproportionately impact the poor, who may have little alternative to spend more of their income on these essentials, or go without.

VI.6. Planned Port Expansions

As described above:

- The recent improvements to capacity and security at the country's main international airport, Piarco, together with planned improvements for the country's second international airport, Crown Point, suggest that Trinidad & Tobago's airport infrastructure will be able to facilitate continued growth in visitor and tourist numbers.
- Improvements currently underway at the country's main port at Port of Spain will more than double cargo capacity by 2014, facilitating growth in non-fuel merchandise trade.
- In terms of trade in fuels, infrastructure is in the process of being upgraded to support the transition of Trinidad and Tobago's economy from oil to LNG, as shown by the recent changes at Point Fontin and Galeota Point Terminal.

VI.7. Modelling results

The modelling results for the Global Emissions Trading for international aviation and shipping (MBM1a) scenario predict a negative impact on T&T's economy, totalling -0.234% of GDP. Impacts from the aviation and maritime sectors contribute -0.083% and -0.151% respectively. This is a modest but significant impact and the fourth largest of the ten CSEs considered here. These results are likely due to the relatively high trade intensity of Trinidad and Tobago, with merchandise trade contributing over 80% to GDP. However, these projected impacts are smaller than other small island states considered here. The reasons for this could relate to T&T's higher wealth and lower (and declining) dependence upon tourism, the latter of which is an important difference when compared to other small island states. Further, the higher GDP per capita, higher HDI and relatively small percentage of the population living under the poverty line of USD 1.25 per day may mean that the consumption impacts of MBMs considered would be less severe for the population of T&T than those of other small island states.

When the MBMs auctioning or tax revenues are used to reduce employers' social security contributions then in case of the Global Emissions Trading for international aviation and shipping (MBM1a) 2025 the expected impacts on GDP are reduced to -0.163%, split between aviation and shipping at -0.065% and -0.098% respectively.

VI.8. List of 'similar' countries

The conclusions drawn from this case-study report may be useful for understanding the impact of market-based measures on other developing world economies which share some similar characteristics to Trinidad & Tobago⁴⁶:

Barbados

The island state of Barbados lies to the north-east of Trinidad & Tobago. Although it has a smaller population of 0.27m, it is comparably wealthy. In 2011 its per capita GDP was \$23,700 PPP, compared to \$20,300 for Trinidad & Tobago. It is also similarly reliant on imports for consumer goods, machinery, and food.

However there are important differences between the economies. Barbados has little oil and gas of its own. Thus the economy is more reliant on tourism, light industry and agricultural products. It also has an important international business and financial services sector.

⁴⁶ Sources: World Bank Global Development Indicators - <http://databank.worldbank.org/Data/Home.aspx> & CIA Factbook - <https://www.cia.gov/library/publications/the-world-factbook/>