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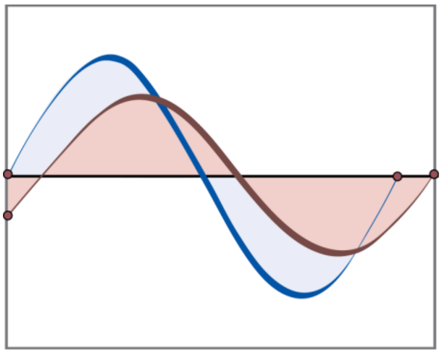

Public-Private Partnerships in Trinidad and Tobago

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Infrastructure is essential to a country's development and prosperity. In recognising this, and in response to the prevailing economic environment which has constrained Government resources, there have been repeated calls for greater private sector involvement in Trinidad and Tobago and, ultimately, for a shift away from the state-led and commodity-dependent development paradigm. Consequently, successive Governments have placed some focus on Public-Private Partnerships (PPPs) which facilitate the transfer of investment projects that have been traditionally executed by the public sector to the private sector. As work continues on designing and implementing the PPP Model for Trinidad and Tobago, this paper seeks to provide insight into the existing PPP architecture. This research further examines PPPs adopted in other jurisdictions and outlines the next steps for the successful implementation of a PPP Model for Trinidad and Tobago.

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1.0 Introduction

Infrastructure is essential to a country's development and prosperity (Karpowicz, Matheson and Vtyurina 2016). In recognising this, from as early as 1956, the Government of Trinidad and Tobago (GOTT) focused on expanding the country's infrastructure and productive capacity. Infrastructure investment expanded rapidly subsequent to 1973 owing to the increase in the international price of oil[1] (Bernal and Leslie 1999; Welsh-Haynes 2003); substantial energy revenues and increasing fiscal space meant that the Central Government was getting into activities traditionally dominated by the private service, through its acquisition of industrial and commercial companies. Not surprisingly, what was once acceptable and the norm came under severe attack in the eighties by political analysts, economists and civil society alike, when it was realised that the majority of state enterprises performed poorly due to mismanagement, overstaffing and inefficiency (Bernal and Leslie 1999; Welsh-Haynes 2003). The Government subsequently embarked on a divestment drive in 1986, a stipulation of the International Monetary Fund's Stabilisation Programme[2], in a bid to encourage private sector participation.

Since 2014, in the wake of depressed energy prices, which has constrained Government resources and decreased capital expenditure, the GOTT has emphasized private sector involvement in providing socio-economic infrastructure in Trinidad and Tobago. In particular, the GOTT has increased focus on Public-Private Partnerships (PPPs), which facilitate the transfer of investment projects traditionally executed by the public sector to the private sector. PPPs are a growing trend in emerging and in-transition countries and are used to provide economic stimulus through investment, employment and efficiency gains. One study predicts that the value of PPPs worldwide is anticipated to surpass US$4.5 trillion per year to 2020 (Da Rita 2017).

PPPs are not new to Trinidad and Tobago, as they have been used, most notably, to deliver water treatment facilities and electricity generation plants. This method of private sector engagement has also been used throughout the Latin America and Caribbean (LAC) region. PPP arrangements in the LAC have predominantly been centred around the transportation sector (roads, airports and seaports) and the utilities sector (electricity and water) (Public-Private Infrastructure Advisory Facility 2014). However, PPPs have been used in several developed and developing countries in the building and operating of sporting facilities (dos Reis and Cabral 2017; Dolgov 2011), providing housing for low and middle income earners (Sani, Sani and Ahmed 2018; Al Shareem, et al. 2014) and in other socio-economic areas such as health and education (Abuzaineh, et al. 2018; Patrinos, Barrera-Osorio and Guáqueta 2009). PPPs have significant potential to address infrastructural deficiencies in Trinidad and Tobago, but have thus far been underutilised.

This paper is structured as follows. Section II briefly explores the fundamental characteristics and concepts of the PPP in the review of the literature. It draws from a large collection of empirical evidence and includes common

[1] By January 1992, The Government of Trinidad and Tobago had in its portfolio 85 companies as well as four public utilities – water, power, transport and ports (Bernal and Leslie 1999). More recently, according to the State Enterprises' Investment Programme at the end of 2017, the Government of T&T wholly owned six energy and energy-based companies, seven companies engaged in financial services, five manufacturing and agro-based companies, 28 service-based companies and one company involved in transport and communication – a total of 47 companies. The Government also owned the majority stake in seven companies and less than 50 per cent in five companies. In addition to this, 51 companies are indirectly owned as well as seven statutory corporations.

[2] See Thomas Fontaine (2003), *Caribbean Country Experiences with IMF Stabilization Programs Within the Context of Globalization.*

reasons for PPP failures, and key components for their success. Next, the paper gives context to the Trinidad and Tobago case in the stylised facts, providing insight into the prevailing PPP architecture and summarising the work done towards building and strengthening private participation through PPP arrangements, before moving to the methodology in Section IV. Section IV uses the case study method to briefly analyse the dynamism of PPPs, using examples from around the world including another Caribbean island, Jamaica. Section V follows with the discussion, and section VI concludes.

2.0 Review of the Literature

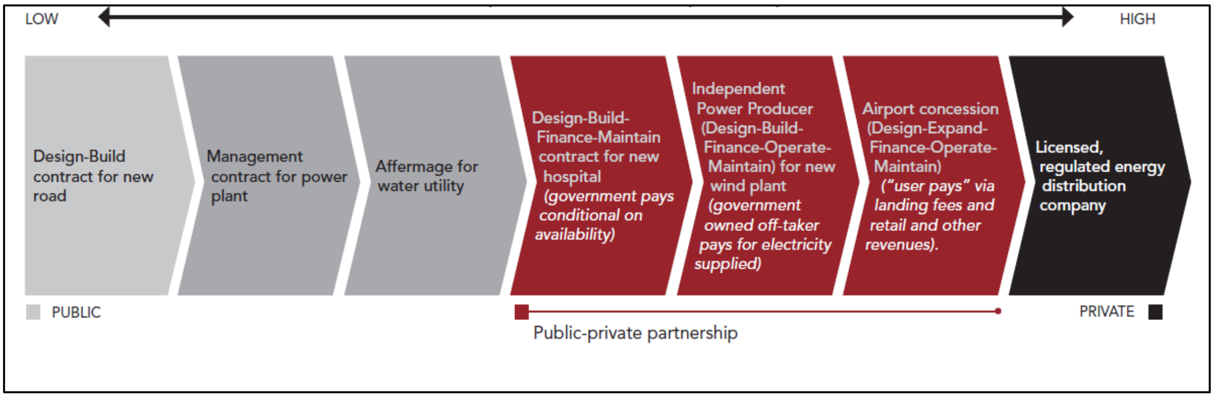
PPPs are a mechanism for governments to procure, implement, and manage public infrastructure and services projects, utilising the resources and expertise of the private sector (Hayes 2017). While there is no universally agreed-upon definition of a PPP, some important characteristics have been emphasised in the literature. Thus, in this review, consideration is first given to the key characteristics of PPPs and how the model differs from the traditional procurement model. This section also draws on other countries' experiences in implementing PPPs, and highlights some important considerations relating to the PPP process, payment models, fiscal implications, accounting treatments and lessons learned along the way.

Traditionally, private sector involvement in the delivery of public infrastructure has been limited to the construction or procurement of the asset, which is then passed along to the government or relevant public body for its operation and maintenance. The government remains the manager of the asset for its life, from initial design through all phases, and accepts all the associated risks in the short and long terms. Experience, however, has shown that this traditional procurement model has suffered from cost and time overruns, the use of outdated technology, design flaws and ineffective operations and maintenance (Fiscal Affairs Department/International Monetary Fund 2004; International Bank for Reconstruction and Development/World Bank 2017b).

The PPP model provides an alternative to traditional procurement and debt accumulation; it refers to a long-term arrangement between the government and the private sector, whereby the latter supplies infrastructure assets and services that traditionally have been provided by the former (See Diagram 1 for the Extent of Private Sector Participation and examples of PPPs) (Fiscal Affairs Department/International Monetary Fund 2004). PPPs combine the relative strengths of each party, providing value for money while minimising government inefficiencies. Focus is placed on the provision of a service by the private sector to the Government or to the public. PPP contracts typically bundle together multiple project stages or functions (Table 1), with a significant transfer of risk[3] to the private sector. Moreover, remuneration depends on performance (Fiscal Affairs Department/International Monetary Fund 2004).

[3] Risks have been divided into five categories by the Fiscal Affairs Department/International Monetary Fund (2004): *construction risk*, related to design problems, building cost overruns and project delays; *financial risk*, which is related to variability in interest rates, exchange rates and other factors affecting financing costs; *performance risk*, which is related to the availability of an asset and the continuity and quality of service provision; *demand risk*, related to the ongoing need for services; and *residual value risk*, related to the future market price of an asset. These five main risks can be further subdivided and distinctly allocated between the public and private sectors using risk matrices, as detailed in the cases of South Africa (Aiello 2014) and Victoria, Australia (Victorian Department of Treasury and Finance 2001).

Diagram 1: Extent of Private Sector Participation



Source: International Bank for Reconstruction and Development /World Bank (2017b)

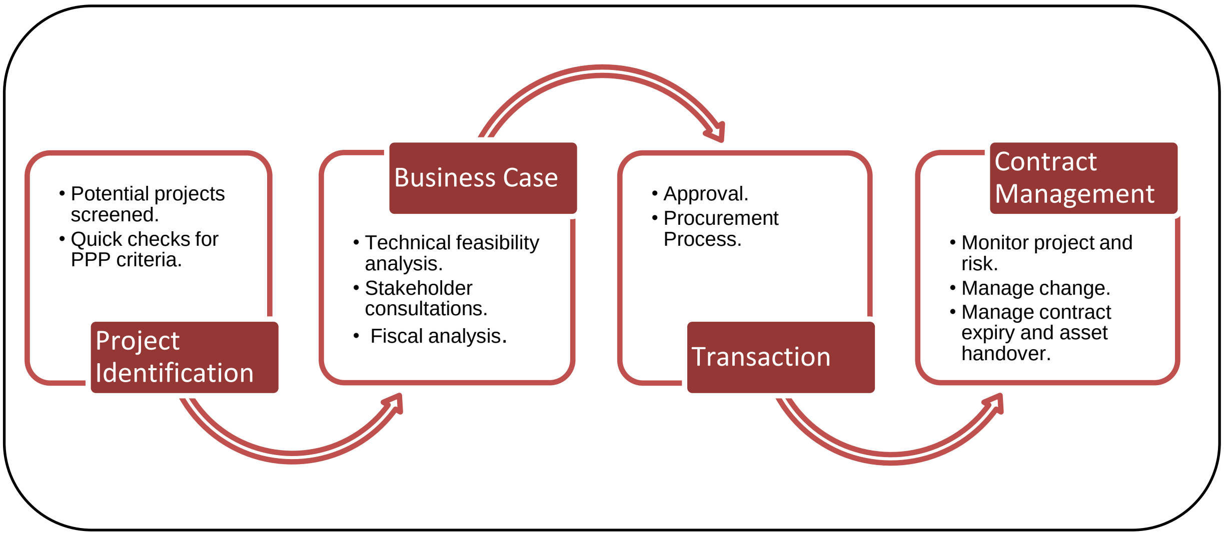
Table 1: PPP Schemes and Modalities

Schemes	Modalities
Build-own-operate (BOO) Build-develop-operate (BDO) Design-construct-manage-finance (DCMF)	The private sector designs, builds, owns, develops operates and manages an asset with no obligation to transfer ownership to the government. These are variants of the design-build-finance-operate (DBFO) schemes.
Buy-build-operate (BBO) Lease-develop-operate (LDO) Wrap-around addition (WAA)	The private sector buys or leases an existing asset from the Government, renovates, modernises, and/or expands it, and then operates the asset, again with no obligation to transfer ownership back to the government.
Build-operate-transfer (BOT) Build-own-operate-transfer (BOOT) Build-rent-own-transfer (BROT) Build-lease-operate-transfer (BLOT) Build-transfer-operate (BTO)	The private sector designs and builds an asset, operates it and then transfers it to the government when the operating contract ends or at some other pre-specified time. The private partner may subsequently rent or lease the asset from the government.

Source: Fiscal Affairs Department/International Monetary Fund (2004)

There is general consensus across the literature concerning the PPP process, which can be broken down into four stages: Project Identification, Business Case, Transaction and Contract Management (Diagram 2) (International Bank for Reconstruction and Development/The World Bank 2017a). In the first stage, Project Identification, authorities identify public assets and services that can benefit from private sector intervention. Each project is quickly checkedto ascertain whether it meets the PPP criteria: economic feasibility, commercial viability, value for money and compatibility with fiscal priorities. Next, in the Business Case phase, a thorough investigation into the identified project is undertaken, risk is allocated and stakeholders are consulted for their expertise on the project design. Here also, prospective revenue earnings are estimated and the fiscal impact and the level of government support needed are evaluated. The contractor is selected in the Transaction stage, once all approvals are obtained by the relevant authorities. In order to select the best candidate to execute the project, the procurement process is competitive and typically follows these steps: Expressions of Interest are invited, transaction documents are prepared, Request for Proposals are issued, and interactions with bidders managed, the bids are evaluated and the preferred bidder selected, and lastly, the contract is settled and final approval sought. The last stage, Contract Management, deals with monitoring the PPP project and managing and mitigating risk, managing change in a way that value for money is achieved over the project lifetime and, when the contract is completed, the asset is handed over to the government (International Bank for Reconstruction and Development/The World Bank 2017a).

Diagram 2: PPP Process



Source: International Bank for Reconstruction and Development/The World Bank (2017a)

Another significant aspect of PPPs is the payment model—how the private sector is compensated for its investment and for services rendered. The International Bank for Reconstruction and Development/World Bank (2017a), in a very detailed analysis of PPPs, opined that PPP payment models depended on the party that retained the demand risk, and proposed three models based on demand-risk allocation. The first, revenue-based PPPs, allows for the demand risk to be transferred to the private company, who is expected to recuperate its costs by collecting revenue from the public for the use of the asset. Examples of this include toll roads and landing fees in the case of airports. With the government-pays model, the private sector receives a monthly or quarterly provision from the government. In order to ensure payment, the private sector must guarantee the asset is available for use by the public and that it meets performance standards. Examples of this include recycling centres where the government pays the private operator based on the amount of waste recycled, and water and electricity generating companies whereby the government or public body purchases the output in bulk for redistribution to consumers. Lastly, the hybrid payment model, as its name suggests, combines the two above-mentioned models. Revenues can be generated from commercialising the asset or service, but the private agent may also be provided with regular payments from the government. PPP projects can also generate additional revenue for both the public and private players. An example of a revenue-generating possibility includes a toll road PPP, where ancillary services are offered on lands near the roadway such as advertising space or gas stations.

Contentious issues surrounding PPP arrangements are the implications for the fiscal accounts, government debt and the accounting treatment on public financial statements. While project financing is typically the responsibility of the private entity, PPP arrangements can create fiscal and debt obligations similar to the traditional procurement method[4]. Similar to the payment models discussed above, fiscal and debt implications can be direct or contingent depending on the allocation of demand risk. Under the revenue-based PPP model, a direct liability is typically not created. However, if there is some fiscal risk, such as, if private sector borrowing is government-guaranteed, international practice dictates that the associated debt should be disclosed in notes to the public

[4] While financing risk is usually allocated to the private entity, if the government is the main purchaser it can directly contribute to project cost. In this case, the mode of financing, whether it be through capital expenditure or debt accumulation will be recorded accordingly on the public financial statements.

financial statements. Once government intervention is considered probable, these contingent liabilities will be recognised as public liabilities on financial statements[5]. Regarding the government-pays method, international practice dictates that the government will directly recognise and include in the financial statements a liability equal to the value of the PPP asset. Hybrid PPPs will be split and recognised accordingly (International Bank for Reconstruction and Development/The World Bank 2017a).

Lastly, it is important to consider some of the evidence against PPPs, the common reasons behind their failure and key contributors of their success. Given the many public failures of PPPs, it is not surprising that there are some who maintain a level of skepticism when considering their viability, preferring instead traditional public procurement and management. Throughout the literature, several issues surrounding the use of PPPs persist. One weighty concern is that PPPs are sometimes used to conceal public borrowing (off-balance sheet accounting) that may lead to unsustainable debt as private sector guarantees on borrowing result in the accumulation of contingent liabilities. Indeed, one detractor of PPPs, Hall (2015), boldly described PPPs as an "accounting trick", as a way for governments to circumvent their own constraints on public borrowing. Another often cited disadvantage of PPPs relates to their long-term nature, which renders it comparatively inflexible and therefore unable to envisage and treat with future events that can affect their operations (Ministry of Finance of the Republic of Lithuania 2015; World Bank 2016). Additionally, there is empirical evidence that PPPs do not always result in lower costs or efficiency gains, and may instead lead to more expensive projects spread out over a long time period. Indeed, the benefits of PPPs are premised on the ability of the private sector to perform better and manage with greater efficacy than the public sector, a premise that does not always materialise, especially if the system is plagued with corruption and secrecy (Reeves 2013; Ministry of Finance of the Republic of Lithuania 2015; World Bank 2016). Adequate financing for PPPs is yet another notable issue, as PPPs typically represent large investment outlays by the private sector. Finally, PPPs are more complex and more time is taken to negotiate the terms of the contract compared to traditional procurement (Hall 2015).

Most PPP failures can be attributed to inadequate or non-existent feasibility studies (Cuttaree 2008). Other common reasons for failures include poor legal framework and enforcement, weak institutional capacity and PPP strategy, unrealistic revenue and cost estimations, lack of thorough financial and economic analysis, inappropriate sharing of risks, lack of competitive procurement and public resistance (willingness to pay not assessed) (Cuttaree 2008). While success cannot be guaranteed, empirical evidence converges on several key contributors to successful PPP implementation. Empircal evidence from successful PPPs regard highly the careful planning and thorough feasibility and technical analyses of the PPP project. For PPPs to work, they must be profitable to the private investor, and solid revenue and cost estimates are key. PPP and sector experts are therefore necessary from the onset. Successful PPPs typically include in-depth stakeholder consultations, and a cooperative approach to the project preparation; compliance with the contractual agreement is highly dependent on the stakeholder inclusion in the process. Other factors that contribute to a PPP's success include the appropriate legal and regulatory framework and strong institutions with appropriate resources. Moreover, throughout the procurement phase, competition and transparency are necessary to minimise the threat of corruption. Finally, managing the contract closely helps mitigate project risks (Cuttaree 2008; Reeves 2013; International Bank for Reconstruction and Development/The World Bank 2017a).

PPPs emerging and in-transition countries have been thoroughly studied. However, information regarding the existing PPP architecture within Trinidad and Tobago and the appropriate repository of knowledge are lacking.

[5] All government-guaranteed debt is considered under contingent liabilities in the public statements for Trinidad and Tobago, regardless if payment is considered probable.

Specifically, Trinidad and Tobago cannot hope to learn from its dealings in the PPP arena if there is inadequate research. This raises the question of the existing PPP "architecture" for the country; what are some of the known PPPs and what policies are currently determining or are anticipated to shape private sector involvement in the future. The next section addresses these concerns.

3.0 Background and Stylised Facts

Trinidad and Tobago has significant infrastructural investment needs, which the Government could find difficult to meet on its own given the downturn in the country's economic fortunes since 2014. In 2014, the Caribbean Development Bank (CDB) conducted an analysis of the electricity, transportation[6] and water industries for several Caribbean countries. It was estimated that in the 11 years to 2025, Trinidad and Tobago would require US$935.0 million to bridge the investment gap in the above-mentioned industries, of which US$779.0 million was expected to come from the public sector. Further, using the 2012 macro-environment and a "business-as-usual" scenario, the CDB study initially predicted that the public sector of Trinidad and Tobago would allocate roughly US$2.6 billion to capital expenditure over the period 2015 – 2025, three times greater than the anticipated public investment need. However, two shortfalls of the research are noted: the analysis did not include requirements for investment in important areas like education and health, while the post-2014 environment is in stark contrast to the 2012 situation. This calls into question whether the public sector is able to fully and efficiently accomplish its mandate of adding to and improving infrastructure stocks.

The prolonged low-energy-price environment and falling domestic energy production continues to dampen economic activity in Trinidad and Tobago. The decline in energy revenues, a major source of income for the Central Government, has decreased fiscal space, threatening the flexibility of Government spending. For that reason, the Government of Trinidad and Tobago pursued measures of austerity, which included the streamlining of recurrent and capital expenditure. Notably, spending on capital projects was harder hit; capital expenditure was recorded at $3.4 billion in 2017, compared to $8.9 billion in 2014 – a 62.1 per cent fall – while recurrent expenditure amounted to $45.9 billion, a 16.6 per cent decline when compared with its 2014 counterpart.

Given the importance of the capital programme to the country's development, a functional PPP Model can bridge the gap between state spending on socio-economic infrastructure. PPPs are generating considerable interest among the political, economic and civil societies, and, within the next few years, PPPs are likely to become an important component of our economic landscape. To date however, case studies on the currently existing PPPs in Trinidad and Tobago – their successes, failures and lessons learned – have not formed part of the national conversation. What little is known regarding the PPP architecture for Trinidad and Tobago is briefly recounted below.

3.1. The PPP Experience in Trinidad and Tobago

The modern era of PPPs in Trinidad and Tobago commenced with the Cabinet approval of the PPP Policy in May 2012. However, public-private initiatives had operated in Trinidad and Tobago decades before the formalising of this strategy. There are several PPPs in operation today, many of which predate 2012 (See Table 2 for Select PPPs in Trinidad and Tobago).

One of the first ever PPP ventures in Trinidad and Tobago, The Power Generation Company of Trinidad and Tobago Limited (PowerGen), was established in 1994, with the partial divestment of the generation assets of the government-owned Trinidad and Tobago Electricity Commission (TTEC). The state, through TTEC, maintained a golden share (51.0 per cent), with Japanese private investor Maru Energy (Trinidad) LLC owning 39.0 per cent, and majority-owned state company National Enterprises Limited (NEL) Power Holdings Limited (NPHL) owning the remaining 10.0 per cent. PowerGen now owns, operates and maintains two power stations. Another electricity generating company, the Trinidad Generation Unlimited (TGU), also began as a PPP venture, with the

[6] The analysis was limited to road networks and did not include other areas such as airport and seaport infrastructure upgrades.

Government of Trinidad and Tobago maintaining 60.0 per cent ownership, and a US-based company, AES Corporation, owning 40.0 per cent. Moreover, the maintenance of the facility was contracted to a German contractor, Man Ferrostaal. Work on the facility started in 2009 and cost the Government US$740.0 million. However, in 2012, the maintenance contract was revoked and TGU assumed care and control of the facility. Shortly thereafter, in 2013, the Government bought out AES for US$31.0 million, to make TGU a wholly owned state enterprise.

Trinidad and Tobago also utilises PPPs in the provision of water. The Desalination Company of Trinidad and Tobago (Desalcott) (1999) and Seven Seas Trinidad (2013) sell water to the Water and Sewerage Authority (WASA). Desalcott is 100.0 per cent privately and locally-owned (as at 2012[7]) by Hafeez Karamath Engineering Services Limited (HKESL), while Seven Seas Trinidad is part of a conglomerate – Seven Seas Water Corporation – established in the US Virgin Islands. While no financing information is easily garnered for the latter, what is known of Desaclcott is that it initially cost US$200.0 million, of which HKESL financed, with an additional investment made in 2012 for the purposes of expansion. No up-front capital was required of WASA, and by extension the state, for the building and operating of either facility. Desalcott's original purchasing agreement is set to last for 20 years (to 2019) while Seven Seas' arrangement was initially signed for a ten-year stint (to 2023).

One of the latest PPP arrangements, the housing development known as Mahogany Court, was commissioned in 2016. The contract, initially worth $145.0 million, was awarded to NH International (Caribbean) Ltd, with the state providing the land, while the responsibility for the full cost of construction fell to the private entity. Roughly 160 apartment units were expected in December 2018. Since its initial signing however, the contract for Mahogany Court has since been renegotiated. In March 2018, NH International (Caribbean) Ltd and the Government arm responsible for the provision of housing for low and middle income earners, the Housing Development Corporation (HDC), re-finalised the Mahogany Court contract. Now worth roughly $192.0 million, the units are now to be completed within three years. The demand risk is assumed to fall to private entity, with costs recuperated through the sale of the apartment units. In particular, the state is expected to facilitate this through the publicly owned Trinidad and Tobago Mortgage Finance Company (TTMF)[8]. It is not known whether the Government is expected to pay the private contractor any lump sum at the completion date.

In addition to the arrangements described above, a Build-Own-Lease-Transfer (BOLT) PPP Programme has been in use for several years, dating as far back as 2000. The BOLT Model allows the private sector to build, finance and own an asset, which is then leased for a period of time before being transferred to the client (Shukla, Panchal and Shah 2014). According to the Auditor General's Report, the Government obtained full financing from creditors (financial institutions) for the construction of buildings or to purchase furniture and equipment[9]. These financial institutions enter into lease arrangements with the respective Ministries/Departments and are paid lease rentals and other fees for the management and maintenance of the buildings, while occupied or used

[7] Prior to 2012, HKESL owned 60.0 per cent while a US-based company, General Electric, owned the remaining 40.0 per cent.

[8] TTMF is jointly owned by the Government of Trinidad and Tobago (49.0 per cent) and the public body National Insurance Board (NIB) of Trinidad and Tobago (51.0 per cent).

[9] Projects financed under the BOLT Programme included the construction of the Attorney General Head Office, the Industrial Court Building, Ministry of Works and Transport Head Office, Sangre Grande and San Fernando Police Divisional Headquarters, the Stadia Project, Trinity Schools and the National Library Building Complex. Under BOLT financing, the National Library was also outfitted with furniture and fittings.

by the lessees[10]. At the end of the lease agreements, ownership is then transferred to the Government (Office of the Auditor General, 2017).

Table 2: Select PPPs in Trinidad and Tobago

PPP Project	PPP Scheme	Starting Date
The Power Generation Company of Trinidad and Tobago Limited (PowerGen)	LDO[1]	1994
Industrial Court	BOLT	1995
Ministry of Works and Transport Head Office	BOLT	1997
The Desalination Company of Trinidad and Tobago (Desalcott)	BOO[1]	1999
Trinity Schools	BOLT	2001
National Library Building Complex	BOLT	2003
Seven Seas Trinidad	BOO[1]	2013
Mahogany Court	DCMF[1]	2016
Sangre Grande Police Divisional Headquarters	BOLT	n.d
San Fernando Police Divisional Headquarters	BOLT	n.d
Stadia Project	BOLT	n.d
Attorney General Head Office	BOLT	n.d

Sources: Various sources

[1] Classified based on accessible information.

3. 2 The Facilitation of PPPs through Government Policies and Programmes

3.2.1 The National PPP Policy

With the exception of Jamaica and Haiti, Trinidad and Tobago is the only other country in the Caribbean that has established a PPP Unit and is currently refining its PPP policy (Caribbean Development Bank 2014)[11]. The PPP Policy for Trinidad and Tobago was approved by the Cabinet on May 31 2012. It defines the PPP arrangement as a "long term contract between a private party (majority privately-owned company) and Government agency (Ministry, State Enterprise, Statutory Body or any other Government authority), for providing a public asset or service (either new or existing infrastructure assets and services), in which the private party bears significant risk and management responsibility[12]. The PPP Policy, though far from being a comprehensive document, outlines the following:

1. PPP definition and how it differs from traditional means of procurement.
2. PPP value drivers: risk transfer, innovation, asset utilisation, service delivery and accountability.
3. Aim and Scope of the PPP Policy: value for money, fiscal responsibility, transparency and probity, environmental and social sustainability.
4. PPP Criteria: feasibility, economic and commercial viability, value for money and fiscal responsibility.
5. PPP Process: Project Identification, Business Case, Transaction and Contract Management.

[10] As at March 2019, monies outstanding under the BOLT debt-arrangement amounted to $118.2 million.
[11] Grenada and St. Lucia currently have PPP Policy but no implementing unit. St. Lucia does however have a focal point person in the Ministry of Finance (PPP Knowledge Lab 2016).
[12] Based on the 2012 Government definition of a PPP, PowerGen will not be classified as such due to the private sector's 39.0 per cent ownership.

6. Institutional roles and responsibilities for the PPP Programme for the PPP Ministerial Committee, the PPP Unit of the Ministry of Finance and the PPP Project Teams.

3.2.2 The Diversification Strategy and Roadmap

The Diversification Strategy and Roadmap was drafted by the Economic Development Advisory Board[13] (EDAB) and was subsequently presented to key Ministers and Permanent Secretaries[14] in March 2017[15]. This strategy is specifically earmarked to be driven by the local or foreign private sector through, inter-alia, PPPs. The aim of this seven-year plan is to increase non-energy exports to 40.0 per cent of export earnings, from the current figure of 15.0 per cent. This plan focused on seven industries: Manufacturing for Export, Nearshore Financial Services, Creative Industries, Tourism, Energy Services, Digital Platforms and Business Process Outsourcing and Transhipment and Ship Repair and Maritime-related Services. Seven enablers – initiatives that must be addressed for the Strategy's realisation – were also highlighted. These are: Infrastructure, Diaspora Engagement, Encouraging Foreign Direct Investment, Economic and Commercial Diplomacy and Branding Trinidad and Tobago, Innovation, Collaboration with Private Sector and Universities and Institutional Reforms. In keeping with the theme of seven, in order to maintain focus, the paper highlighted seven obstacles that can impede the diversification agenda: Income and Wealth Inequality, Corruption, Ethnic Competition, Low Productivity, Lack of Confidence, Leadership and Management Culture and Crime and Criminality.

Of particular interest are the two initiatives (enablers) that deal with infrastructure and private sector collaboration. Considering the latter, the EDAB presented the paradox before them; while the Government must remain a key driver in certain areas of strategic importance, a transformed and progressive society is one whose dynamism depends largely on the private sector. In respect of infrastructure, the document outlined differences between the physical and 'soft' investments as well as a few key areas where investment was critically needed; including, road networks in rural and urban areas, both airport terminals in Trinidad and Tobago[16], and the relocation of the port in the nation's capital with 'concomitant capacity expansion'. Regarding 'soft' infrastructure, the EDAB emphasized a need for the improvements in systems, processes and service delivery.

While no distinction was made between investments required of the public and private sectors, the Plan stated that at least US$10.0 billion will be needed over the seven years to 2023 for the successful implantation of the Strategy. Also highlighted were a number of projects under 13 subheadings, several of which are in progress, including work in the Cocoa and Fine Chocolate Industry (Manufacturing for Export).

3.2.3 The National Development Strategies and Sustainable Development Goals

This section reviews the envisaged contribution of PPPs to the attainment of the National Development Strategies, 2005-2020 and 2016-2030 – referred to as Vision 2020 and Vision 2030 respectively.

Vision 2020 represented an ideal[17]. It was an ambitious 15-year undertaking towards economic development, set against a backdrop of buoyed energy prices. The goal, however, was one that had been articulated many times

[13] The EDAB was established in 2016 but was dissolved on April 20, 2018

[14] The Diversification Strategy and Roadmap was presented to the Ministers and Permanent Secretaries of the Ministry of Planning and Development, Ministry of Works and Transport, Ministry of Trade and Industry and the Ministry of Finance

[15] This Programme has not yet been approved by the Cabinet.

[16] In the 2019 Mid-Year Revised Budget, the Minister of Finance announced a PPP for the upgrade of the Tobago airport terminal. The main terminal will be built using a design-build-finance PPP scheme and is expected to be completed in 2021.

[17] The work on the document began in 2002, when a 25-member Planning Committee – the Multi-Sectoral Group (MSG) – was established by the Cabinet of the Government of the Republic of Trinidad and Tobago. It was completed in 2005 and charted a way forward for the 15 years to 2020.

over—one which still echoes today. With such a heavy reliance on one income stream, energy, for the majority of its wealth, Trinidad and Tobago would remain susceptible to the volatility of international energy prices and domestic production. Vision 2020 was deemed a "strategic direction document", one that would have allowed Trinidad and Tobago to take advantage of the prevailing economic environment to build a sustainable future for the country. To achieve developed nation status, Vision 2020 outlined five broad Pillars: Developing Innovative People, Nurturing a Caring Society, Governing Effectively, Enabling Competitive Businesses and Investing in Sound Infrastructure and Environment[18]. Moreover, under each of the five pillars, strategies were categorised based on five broad thematic areas: Institutional Development, Public-Private Sector Partnerships, Executing Existing Strategies and Programmes, Executing New Strategies and Programmes and Changing Mindset and Culture. Table 3 below highlights the initial strategies envisaged for Public-Private Sector Partnerships, under the pillar of this study's main focus - Sound Infrastructure and Environment.

Table 3: Public-Private Sector Strategies under Infrastructure Pillar, Vison 2020

Pillar	Public-Private Sector Strategies
Investing in Sound Infrastructure and Environment	**Expand the port capacity both physically (berths, equipment, maintenance facilities, container storage etc.) and managerially (inclusive of IT systems).** 1. Include the private sector in the process so as to ensure fiscal and managerial discipline in operations. 2. Invite foreign private sector partnership as a mechanism to accelerate the internationalisation process and learning experience. **Improve mass transportation systems through public/private partnerships.** 1. Introduce a monorail system along the East/West and North/South Corridor. 2. Start a high-speed water ferry system from Port-of-Spain to San Fernando and to Tobago. 3. Expand urban bus transportation systems (not diesel powered). 4. Improve inter-island air transport. 5. Restructure, regulate and de-monopolise the network utilities (telecommunications, water and electricity) and postal sectors as appropriate.

Source: Vision 2020 Draft National Strategic Plan (2005).

In 2006, a medium term plan – Vision 2020 Operational Plan (2007-2010) – was drafted. Under Pillar Five, Investing in Sound Infrastructure and Environment, the following measures that included a private sector component were outlined as priority for over the medium term.

Pillar 5: Investing in Sound Infrastructure and Environment

1. Fiscal measures will be employed strategically to achieve desired outcomes and public-private financing options will be explored to address future infrastructure needs.
2. Consistent with international trends, Government is committed to utilising public-private sector financing and management partnerships in the upgrade of port services and expansion of air, land, and sea transport systems. Collaboration will focus on the development of ports, water taxis, fast ferry and air-bridge services. The private sector will also be encouraged to participate in urban renewal and the redevelopment of communities.
3. Efforts to improve the efficiency and quality of services of WASA and TTEC, utilising various forms of public-private sector arrangements for management and ownership have failed to transform them into

[18] Within the five Pillars, 22 National Goals were outlined alongside 125 objectives.

viable self-sufficient entities. Burdened with problems of operational inefficiency, these utilities continue to be a financial strain on the State. Over the Plan period, investment in the (utilities) sector will be informed by systematic programme development and implementation with built-in mechanisms for monitoring and evaluation of the performance of the sector. Collaboration with other agencies and Local Government Bodies as an integral part of business planning will also be implemented. Individual assessments will be undertaken to determine the most suitable public-private partnership arrangements for effective management and financing of the development initiatives for the utilities.

For the period 2006-2010, Vision 2020 was reviewed. This review revealed that of the 125 objectives outlined, 18.2 per cent had been achieved, 51.6 per cent were in progress at the end of 2009, and 29.8 per cent achieved no significant progress. Particular to our study – the three objectives outlined above – at first glance, no significant headway was made in achieving them. Even as it relates to the third strategy, both utility providers, WASA and TTEC, still remain a drag on fiscal resources. Despite some efficiency gains from the outsourcing of utility provision[19], mismanagement and/or overstaffing[20], and low[21] and infrequently adjusted tariffs due to government regulation affect performance and profitability.

Vision 2030 was born in 2016, 11 years after the launch of the Vision 2020 development manual, and was to coincide with the achievement of the Sustainable Development Goals set out by the United Nations. Similar to Vision 2020, Vision 2030 is based on five Pillars: Putting People First, Promoting Governance and Service Excellence, Improving Productivity through Quality Infrastructure and Transportation, Building Globally Competitive Businesses and Valuing and Enhancing our Environment. These 5 Pillars feature a total of 51 overlapping goals categorised as short, medium or long-term. Much attention was placed on the short-term (2016-2020); similar to Vision 2020, an operational plan for the short term was included and featured the 22 goals, 80 strategic initiatives and actions and 80 projects and programmes. Under Pillar Three, Quality Infrastructure and Transportation, in the short term, PPPs were specifically earmarked for one of the 16 strategic initiatives: to improve access to public transport services through the acquisition of buses using alternative fuels (such as Compressed Natural Gas (CNG)). Other than this, PPP ventures were not assigned to any other short-term strategy.

3. 3 The Environment for PPPs in Trinidad and Tobago

According to the Economist Intelligence Unit (EIU) in 2017, the economic environment in Trinidad and Tobago was not conducive to mobilising private investment in infrastructure through PPPs. In an analysis of five categories, comprising 23 indicators and 78 sub-indicators, Trinidad and Tobago was ranked 14th out of 19[22] Latin American and Caribbean Countries (See Table 4). In its report, the EIU opined that after the 2012 Policy approval by the TT Cabinet, the thrust towards PPPs slowed. Several factors contributed to Trinidad and

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[19] Regarding the generation costs of electricity, TTEC has kept within industry averages; the two PowerGen plants in operation (excluding the recently decommissioned Port-of-Spain plant) are reported to have a cost of production per Kilowatt hour of \$0.19, roughly similar as the US average for gas turbines of US\$0.03 (Fraser 2014; U.S Energy Information Administration 2017).

[20] A report by the Minister of Public Utilities in December 2017 revealed that WASA is currently "60.0 to 70.0 per cent overstaffed", needing only 3000 workers but with 5200 on its payroll. WASA employs 13 persons per 1000 connections, while the Caribbean average is seven per 1000 (Hassanali 2017b and 2017c).

[21] Electricity and water tariffs for Trinidad and Tobago was calculated at US\$0.04 per kilowatt hour and US\$0.31 per cubic meter respectively, compared to a Caribbean average of US\$0.33 and US\$1.79 respectively (Hassanali 2017a).

[22] These countries are (in order of 2017 overall performance): Chile, Colombia, Brazil, Jamaica, Peru, Mexico, Honduras, El Salvador, Nicaragua, Uruguay, Costa Rica, Guatemala, Paraguay, Trinidad and Tobago, Panama, Dominican Republic, Argentina, Ecuador and Venezuela.

Tobago's poor performance on the Index. The PPP Unit in the Ministry of Finance is still not fully staffed, institutional knowledge remains low and therefore an external consultant has to be engaged to provide technical assistance. Moreover, poor governance and the lack of transparency remain concerns; seldom is clarity provided on how decisions are made regarding projects that have been publicly tendered and awarded. Meanwhile the Public Procurement and Disposal of Public Property Act of 2015 was deemed a step in the right direction; the Procurement Board was confirmed in January 2018, while certain critical sections of the Act are expected to be proclaimed in August 2019.

Table 4: Analysis of the Environment for PPPs in Trinidad and Tobago

	Trinidad and Tobago's Score (Rank)	LAC Average Score
Regulations	49 (17)	69
Institutions	48 (13)	55
Maturity	78 (8)	69
Investment and business climate	67 (5)	57
Financing	37 (14)	45
Overall	56 (14)	59

Source: The Economist Intelligence Unit (2017)

4.0 Data and Methodology

In an attempt to show how PPPs can benefit the Trinidad and Tobago economy, this section utilises a qualitative approach using the case study method to analyse PPPs in the Caribbean and economies further afield. The case study is one way of doing social science research and is typically preferred when the focus is on a contemporary phenomenon within real life context (Yin 1984). While some data is available for PPPs for Trinidad and Tobago (See the Investment and Capital Stock Database of the Fiscal Affairs Department of the International Monetary Fund); the research focuses on how PPPs can contribute to the economic landscape of Trinidad and Tobago and, thus, a qualitative perspective was deemed most appropriate.

Remarkably little is known of the overall performance of PPPs in the Caribbean; the Caribbean narrative is relatively silent about its PPP journey, and offers little by way of a case study. In that vein, one case study is presented on Jamaica, while two other PPP cases will be presented on South Korea and Singapore. One case from Latin American, Mexico, will also underscore why a thorough technical analysis and feasibility study is needed before undertaking a PPP venture.

4.1 Jamaica

Besides Trinidad and Tobago, Jamaica is the other Caribbean country that has made significant strides in most facets of PPPs. There are two units responsible for selecting and managing PPPs: the PPP Unit of the Ministry of Finance and the Public Service and another within the Development Bank of Jamaica. Both units have defined roles; the Ministry assesses the value for money and the fiscal risks of each project (Business Case), while the Development Bank is responsible for the day-to-day coordination of the programme (Project Management). The Development Bank also thoroughly appraises each project and selects the contractor (Transaction). Regarding its accounting treatment, all PPP projects appear on Government's books; this suggests that PPPs in Jamaica do not necessarily create fiscal space. PPPs are classified as either requiring funding or support for operations, or as projects that are self-sustaining. While the latter is not included in public debt as users pay for the services rendered and the operation of the project does not rely on Government support, the possible debt of the project is classified under a separate contingency ceiling on supporting documents to the financial statements. The PPP contingency ceiling is 8.0 per cent of GDP (Ministry of Finance and The Public Service, Jamaica n.d.).

One of the more popular successful PPP arrangements in Jamaica, and indeed the Caribbean, is that of the Sangster International Airport (SIA) in Montego Bay. Prior to the establishment of PPP Policy, in the early nineties, the SIA was earmarked for privatisation as its operations were a considerable drain on the Government's fiscal resources. Moreover, the airport was in some need of expansion and upgrade if it were to continue to meet its passenger load; an investment that the Government knew that it was unable to undertake. By the mid-nineties, through a special Airport Task Force and a Project Unit at the Airports Authority of Jamaica, an initial proposed structure for privatisation was developed. The first attempt at privatisation sought only the transfer of the land-side (and not air-side) terminal operations, with the Government having a golden share in the terminal operating company and no single company holding more than 25.0 per cent. In 1997, a preliminary report from the concessionaire United Infrastructure Company/Airport Group International was submitted, which evaluated the feasibility of the project and presented an alternative proposal. The offer was subsequently rejected by the Government (Caribbean Development Bank 2014; International Civil Aviation Organization 2015).

With the aim of engaging the private sector still under consideration, in 1998 the cabinet approved the formation of an Enterprise team, under the direction of the National Investment Bank of Jamaica[23] (NIBJ). Despite not

[23] The NIBJ acted as secretariat to the Enterprise Team, handling all the administrative and logistical activities.

availing of a PPP policy at the time, the team, which comprised representatives of the Office of the Prime Minister, the Ministry of Finance and Planning, the Civil Aviation Authority, the Airports Authority of Jamaica, the Attorney General's Office and the Ministry of Transport & Works, was able to invite commercial airport operators through a transparent and competitive bidding process. With clear privatisation objectives[24], the NIBJ revoked the previous specifications of the failed privatisation transaction, and instead included the entire airport operations (land- and air-side) and its revenues in its concession arrangements. The Concessionaire was to establish an airport operating company wholly under its control, with no limitations on the shares of the airport operators, but with a requirement that each operator control greater than 10.0 per cent of operations. The Government's golden share was also withdrawn.

In the latter part of 1998, the pre-qualification process began. Two years later, in 2000, the final round of bidding was launched and in April 2001, four pre-qualified companies submitted proposals. Vancouver Airport Services Consortium was subsequently chosen for a 30-year Build-Operate-Transfer concession for the management and operation of the airport and, within 18 months, negotiations were finalised. The handover took place in 2003. In the first decade of operations, the consortium of operators who formed Montego Bay Jamaica (MBJ) Airports Limited invested roughly US$200.0 million, upgraded infrastructure and improved customer service. Investments were financed through shareholder debt and loan agreements with the International Finance Corporation (IFC), which were repaid from the Airport Improvement Fee of US$5 per outbound passenger. Regarding its profitability, while the financial performance is not publicly available, "MBJ meets all concession agreement requirements with the Government, including a significant concession fee payable to Jamaica annually" (International Civil Aviation Organization 2015). Moreover, through this process, the relevant authorities addressed key issues in the PPP Programme initiative.

4.2 South Korea

Since the passing in 1994 of its PPP Act, South Korea has made significant advances in closing its infrastructure gap. Strong political support for PPPs in Korea has helped, coupled with quick legislative changes to support the changing market dynamics[25]. In 2005, the Public and Private Investment Management Centre (PIMAC) was founded with the merging of the Public Investment Management Centre (of the Ministry of Planning and Budget) and the Private Infrastructure Investment Centre of Korea (of the Korea Research Institute for Human Settlements). Under this new title, the PIMAC was made responsible for the pre-feasibility studies of public infrastructure, support for PPP legal and regulatory frameworks, support for bidding and negotiation for PPP projects and for promotion, research, and capacity building. Projects are approved by the Private Investment Project Committee (PIPC), which is chaired by the Minister of Planning and Budget. Notably, Korea's PPP Act specifies the use of two PPP modes of procurement schemes: the Build-Transfer-Operate (BTO) Model and the Build-Transfer-Lease (BTL) Model (Hahm n.d.; Park 2012).

One successful PPP project in Korea is the Landfill Gas Resource (LGR) Project at the Sudokwon Landfill Site—one of the world's largest PPPs of this nature. The LGR Project was born out of a need to reduce environmental pollution due to the daily average of 20,000 tons of waste being collected and the resultant harmful gases

[24] The two objectives were to relieve the Government of the financial burden of finding the necessary capital for the development and expansion of the airport and to facilitate the exploitation of the full commercial potential of the airport, broadening its revenue base and reducing its dependence on passenger charges and landing fees (Caribbean Development Bank 2014).

[25] In 1999, the PPP Act was amended to promote stronger a financial sector, and to counteract the effects of the Asian Financial Crisis (1997-1998) on infrastructure development (Park 2012). Again in 2005, the PPP Act was updated to include the Build-Transfer-Lease Mode of PPPs and was expanded to include social infrastructure.

emitted. This project saw the development of electric energy from alternative sources[26], and the improvement of the surrounding environment. Under a BTO agreement, the private sector funded the major facilities needed while the Government facilitated the free use of the Landfill. Before the Transaction Stage, in June 2000, comprehensive feasibility and technical analyses were conducted by the Ministry of Environment and the Korea Environment Corporation, which considered the benefits and risks from similar undertakings in other countries. Only after thorough preparation were bids solicited in October 2000. The final agreement was signed with Ecoenergy Holdings Company Limited in March 2003 and construction began on the US$86.4 million facility in March 2004. The capital costs were undertaken by the private project company; funds were sought from five investors of which 25.0 per cent was equity and 75.0 per cent was debt. A concession period of 11 years was granted to the private company for the management and operation of the facility, after which ownership of the project facilities and operating equipment will revert to the Government of Korea. The operational period began in March 2007, and was set to end in March 2018[27] (Asia-Pacific Economic Cooperation 2014).

Revenue is collected by the private contractor for the sale of electricity; the project was estimated to result in electricity being sold at US$0.05 per kilowatt/hour[28] (May 2011 constant prices). The agreement also included a minimum revenue guarantee, whereby if real revenues fell below 90.0 per cent of projected, the State would grant compensation for the difference. In contrast, the Government would redeem any sales revenues in excess of 110.0 per cent of projected. An analysis of electricity sales between 2007 and 2013 revealed that revenues amounted to 189.0 per cent of anticipated receipts, resulting in 79.0 per cent of initially projected revenues – US$88.1 million – contributing to the treasury. Moreover, social benefits abounded. Electric energy from alternative sources is being supplied to roughly 18,000 households, generated through the 50 mega-watt power generating steam turbine. The gases used in electricity generation comprise more than 50.0 per cent methane[29], and its removal from the environment is helping to combat global warming (Asia-Pacific Economic Cooperation 2014).

4.3 Singapore

Singapore is the first Southeast Asian country to implement PPP models for social infrastructure (Han 2016). The PPP Model was first introduced to Singapore in 2003 (Han 2016) with the awarding of its first PPP contract for a desalination plant (Gunawansa 2010). In the year following, the Ministry of Finance issued guidelines for the successful implementation of PPPs and commissioned a taskforce within the Performance & Resource Management Unit (Economic and Social Commission for Asia and the Pacific 2013). This unit was specifically designated to create awareness of PPPs, handle policy and provide guidance. PPPs are selected based on the anticipated project cost; the PPP Task Force within the Ministry of Finance will explore the possibility of a PPP for any project with an anticipated capital cost above SGD$50.0 million. Projects below the SGD$50.0 million threshold are also eligible for PPPs depending on the nature of the job and its ability to fulfil the value for money objective (Ministry of Finance, Singapore 2018). Singapore has successfully utilised PPP procurement for physical infrastructure such as in the construction of defence facilities as well as in the area of Information Technology and Cybersecurity (Gunawansa 2010).

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[26] The project used a resource cycling system in which gas collection ducts within the landfill are used to capture all landfill gases produced during the disposal process, after which they are sent to a steam turbine to be converted to electric energy (Asia-Pacific Economic Cooperation 2014).

[27] The facility costs roughly US$6.6 million per year to operate.

[28] No regulations existed for specific sales prices.

[29] Methane is found to be 21 times more harmful than carbon dioxide in global warming.

Of interest to this study is the use of the PPP Model to procure the Singapore Sports Hub, presumably the largest sporting PPP infrastructure in the world (Dragages Singapore Limited n.d.)[30]. In 2001 a report was issued by the Singapore Sporting Committee, which detailed 40 recommendations to try to engender a sporting culture in the country. One recommendation sought to build a multi-purpose sports-hub, and a feasibility study was subsequently completed in 2003 which determined its impact, size, location, facilities and business model. After extensive market testing and a rigorous pre-qualification process, three consortia were invited to submit formal bids by December 2006. In 2008, after the final clarification of the submitted proposals, the Committee entered the preferred bidder phase, where the Singapore Sports Hub Consortia was subsequently chosen by the Singapore Sports Council. In August 2010, the contract was brought to a financial close and the final agreement signed[31], and work on the structure began in September of the same year. The US$1.0 billion sporting complex was completed in 2014 (Keating 2006; Centre For Management Practice 2017).

The Sports Hub represented a major investment for the country, for which the Government had no initial outlay. For the project, the consortium achieved a deal with ten banks for a ten-year loan facility[32]; any refinancing risk was to be spread between the Consortium and the Sports Council (Tho, et al. 2014). The contract specified a Build-Operate-Transfer PPP with a concession period of 25 years (to 2035), after which the venue will transfer to the Singaporean Government. The concessionaire – the Singapore Sports Hub Consortia, with engineering and construction firm Dragages Singapore Limited at the helm – brought together several actors of different strengths including those with the responsibility for facility management, venue operations, retail, information technology and catering. In terms of compensation for the private entity, demand risk is shared; revenue includes a fixed availability payment from the Government[33] and a share of the commercial revenues from operations (Singapore Sports Hub n.d.).

4.4 Mexico

Mexico has been a pioneer among the Latin American countries and middle and low income countries in implementing PPPs (Carpintero and Barcham 2011). Prior to formalising its PPP laws in 2012[34], Mexico embarked on numerous PPP projects, which spanned over several sectors including information technology and transportation (airports, roads and railways) (PPP Knowledge Lab 2016). Notably, Mexico launched a private toll road programme in 1989 (to 1994), its first toll road programme and one of its more ambitious undertakings, which saw the building of one of the longest networks of private toll roads in the world (Carpintero and Barcham 2011). Fifty-two projects (of which 25 were competitively tendered) saw the construction of over 5,300 kilometres (km) of toll roads, of which 3,500 km were granted to the private sector (Cuttaree 2008; Carpintero and Barcham 2011). This PPP represented a US$13.0 billion investment of which federal and state government grants and equity accounted for 19.0 per cent, domestic commercial banks, 52.0 per cent, and concessionaire equity, 29.0 per cent (Ruster 1997).

[30] Dubbed as one of the world's first fully-integrated sports, entertainment and lifestyle destinations, the Singapore Sports Hub spans 35 hectares and boasts of a national stadium, indoor multipurpose stadia, an indoor aquatic centre and an outdoor water sports centre, a museum, library and mall, plus other sporting centres (Singapore Sports Hub 2018).

[31] Financial close was initially scheduled for 2008, but was delayed due to the Global Financial Crisis. Post-crisis, a funding competition was launched in early 2010 which attracted "strong interest from the banking market" (Tho, et al. 2014).

[32] The banks financed 100.0 per cent of the project, maintaining a debt-equity ratio of 85:15.

[33] According to the Centre For Management Practice (2017), "the government would save on the initial capital outlay and only make monthly payments based on the availability of the physical facility, subject to availability criteria but irrespective of usage… no payment would be made should the facility be unavailable for use".

[34] In addition, Mexico's PPP implementation is disaggregated; while there is no single PPP agency, each sector and level of government is responsible for planning, implementing and supervising projects (PPP Knowledge Lab 2016).

By March 1995, 44 of the 52 road projects, representing 5,120 km, were either fully or partially operational (Ruster 1997). In an analysis of the programme, it was found that a number of problems and the failure to adequately address them led to average construction cost overruns of 25.0 per cent. The lack of rigorous technical analysis prior to the programme's implementation also led to average actual revenues falling short of estimated revenues by 30.0 per cent. The concession design also made it mandatory that a free road be built parallel to the toll road. This resulted in low traffic on the tow road. Moreover, the viability of the project was further compromised due to the short concession periods of 15 years for some contractors, which led to high toll fees; one study found that the average toll road fee increased from US$0.02 per km to US$0.17 per km (Ruster 1997, Cuttaree 2008, Carpintero and Barcham 2011). The effects of the project-level mishaps was further exacerbated by the Mexico Banking Crisis (also referred to the Tequila Crisis) of December 1994, which saw the largest depreciation of the Mexican peso against the US dollar in one year[35] (Musacchio 2012).

The combination of the above adverse circumstances led to a major restructuring of the debt and equity investments; the banks were faced with roughly US$5.5 billion in nonperforming loans while concessionaires began writing off their investments. Thus, by the end of 1995, the Government had assumed responsibility for 23 projects and had paid outstanding debts to the commercial banks and construction companies to the tune of US$5.0 billion and US$2.6 billion respectively.

[35] Dubbed the worst banking crisis in Mexican history, the Tequila Crisis of 1994/95 saw the depreciation of the Mexican currency to 10 pesos per US dollar, from roughly 5.3 pesos. This resulted in a severe recession, with GDP falling over 6.0 per cent in 1995 (Musacchio 2012).

5.0 Outcomes and Findings

The review of the above cases is useful for current and potential policy makers interested in a successful PPP regime in Trinidad and Tobago. The case studies illuminate the seriousness of a thorough approach to PPPs, and provide insight into the significance of a comprehensive strategy and process.

The key takeaways for a successful PPP are:

1. ***Thorough feasibility and technical analyses.*** Improper planning undermines the success of any venture. This was the case with Mexico, whose first road toll programme was described as a dramatic failure (Carpintero and Barcham 2011). Several analysts believe that the programme's failed because it was rushed and poorly designed. According to Ruster (1997), projects often commenced with only very preliminary engineering and design work, and several changes to the project were made after work had started. In addition, not all stakeholders were consulted in the process; the private contractors and the Govenment did not exercise due diligence in securing the right of way, which led to resistance from adjacent communities, farmers, environmentalists and historical conservationists. In one instance, to appease local interest groups, 60 pedestrian bridges were constructed when only four were initially expected. All of these issues resulted in time delays and cost overruns[36]. In contrast, in the case of South Korea, the LGR Project was conceptualised in 1998, and a planning team established in 1999. The feasibility and technical analyses engaged the expertise of the Korea Environment Corporation and utilised real world examples of similar projects. The analysis took one year, after which the decision to pursue a PPP was made and a basic plan announced.
2. ***Marketable and realistic business plan and transaction structure.*** To attract significant investor interest, the business structure must be marketable, realistic and profitable for the private sector. Jamaica's first attempt to involve the private sector showed that the initial transaction structure was not feasible to the private stakeholder. The Government of Jamaica sought to maintain significant control over operations through its proposed golden share, while only privatising one area of terminal operations, thus limiting the revenue base. The subsequent alternative proposal made by the sole-bidder at the time, United Infrastructure Company/ Airport Group International, was rejected by the Government and hence the privatisation initiative was stalled. Similarly, Mexico's toll road programme grappled with poor transaction structure, which led to higher tolls as a result of a short concession period, and inadequate traffic due to the required free road to run parallel to the toll road. This resulted in average actual revenues falling 30.0 per cent below estimates. Only 5 of the 52 projects met or exceeded revenue targets. Moreover, many of the concessions had to be renegotiated and in 1997, the Government was forced to take over almost half of the contracts (Carpintero and Barcham 2011).
3. ***Competitive and structured procurement process.*** Competitive bidding allows for a fair and transparent procurement process. Coupled with this, a good screening process with clear bid-selection criteria allows for the most capable and efficient company being chosen. Turning again to the Jamaica example, the Government engaged a single bidder in one-on-one negotiations in the first PPP attempt for the SIA. When the proposal was rejected, the Government had no one else to turn to and the project was shelved. Meanwhile, Mexico's first toll road programme competitively tendered 25 of the contracts while 27 were not competitively engaged. In his analysis, Ruster (1997) suggested that there were vague and inefficient bid

[36] One estimate places the average cost per km of new highway at roughly US$2.8 million from initial estimates of US$1.7 million.

selection criteria to guide the selection of companies, which led to bidders that lacked the technical and building capacities for such a large scale project being selected.

4. ***Strong disciplined institutions, tight agency coordination, specialised PPP staff and qualified experts.*** In Jamaica's second attempt at a PPP for SIA in 1998, a team of the relevant stakeholders was formed under the guidance of the NIBJ. The NIBJ took the role of programme coordinator and provided expertise in privatisation and an order to the transaction that was previously lacking. The NIBJ was experienced with the complexities of the bidding process and the subsequent negotiations with sophisticated investors. With an expert coordinator at the helm, the team made strategic changes to the document and was able to proceed with a transparent and competitive procurement process. The NIBJ was particularly effective in maintaining tight agency coordination among all stakeholders. Similarly, the South Korean example underscores the need for knowledgeable PPP staff, and the engaging of experts in the requisite project field; the Korea Environment Corporation was consulted before the formalising of a base plan. South Korea also had a dedicated PPP Unit in place prior to the LGR Project. In contrast, Mexico's local construction industry lacked the technical capacity to undertake such large projects, a fact which was not foreseen or appropriately acknowledged due to improper planning. Further, Mexico's state-owned banks did not exercise due diligence when granting loans to contractors; many lenders waived important conditions necessary for initial and subsequent funding. Poor financial discipline coupled with the underdeveloped domestic financial market resulted in large amounts of nonrecourse financing[37] and the issuance of short to medium-term debt at high interest rates (Ruster 1997). Regarding agency coordination, formal communication channels between the public and private sectors were never established which gave rise to a relationship which occasionally lacked transparency and cooperation (Ruster 1997).
5. ***Strong political support, appropriate PPP and regulatory frameworks and standardised transactions.*** The Korean and Singaporean examples illuminate the need to have appropriate chains of command with clear responsibilities for those involved in the coordination and implementation of PPPs, as well as strong political resolve and support for the initiative. In the Korean case especially, the changing market dynamics in the late 1990s and early 2000s were met with swift responses and the necessary legislative adjustments by the Government. Korea's PPP law also stipulates only two PPP procurement schemes, which allow for relatively standardised transactions[38]. In the case of Jamaica, the PPP initiative also elicited strong support from the Government. At the time of the airport concession, Jamaica lacked the appropriate regulatory framework for privatised airports. Following recommendations from its advisors, the Government set out to develop such a policy to give the private stakeholders greater certainty. Enacting this policy was essential to the success of the SIA PPP, but took longer than two years to be passed which added to the programme's delay[39]. Such a delay is avoidable with more forward planning.

[37] In a nonrecourse loan agreement, a lender fundamentally agrees to limit its recourse to specified assets rather than to the general assets of the borrower or the guarantors (Geier 2009). Put another way, the lender is only entitled to repayments from the profits of the project being funded. In the case of default, the lender will seize the asset but cannot hold the borrower personally accountable, even if the loan value cannot be recouped from the asset.

[38] Standardised transactions can help circumvent improvised solutions which may be detrimental to investors and lenders.

[39] The Airports (Economic Regulation) Act was passed in 2002.

6.0 Conclusion and Policy Implications

Infrastructure is essential to a country's development and prosperity. Given the post-2014 economic downturn characterised by decreasing fiscal space and increasing debt, the Government of Trinidad and Tobago must move away from the traditional state-led commodity-dependent development paradigm to one whereby the private sector plays a leading role in the economic development of the country. While not a panacea in itself, utilising PPPs in infrastructure is a growing trend in emerging and in-transition countries, which can provide the much needed economic stimulus through investment, employment and efficiency gains. Given the potential of PPPs to close the infrastructure gap, the model has thus far been significantly underutilised.

The evidence from this study intimates that the while a well-functioning PPP is not always guaranteed, there are several underlying factors that contribute to its success. Using evidence from four cases, this paper highlighted several contributing factors to a successful PPP: thorough feasibility and technical analyses, a marketable and realistic business plan and transaction structure, a competitive and structured procurement process, strong disciplined institutions, tight agency coordination, specialised PPP staff and qualified experts, strong political support, appropriate PPP and regulatory frameworks and standardised transactions.

Notably, these findings suggest that if Trinidad and Tobago is set on creating a robust and thriving PPP system, several issues must be addressed.

1. ***The important matter of creating an appropriate PPP regulatory framework must be confronted.*** While the PPP policy in its current state focuses on very important aspects of the PPP arrangement, it lacks much of the detail required of a PPP policy document. Work is still required to comprehensively detail the roles and responsibilities of each actor in the process. Particularly, matters of transparency, clear reporting lines through each stage of the PPP process, the detailed make-up of the project and support teams, essential characteristics and some examples of what constitutes a PPP arrangement, all need to be clearly articulated and defined. Moreover, the document altogether did not address key issues such as:
   a. How it links with other Government policies and development strategies such as the National Development Strategy (Vision 2030), the Ministry of Trade and Industry's Strategic Plan (2016-2020) and the Diversification Strategy;
   b. The overall privatisation initiative of the Government;
   c. A comprehensive criteria chart which details the definition of each criterion (e.g. what constitutes value for money and when is a project considered technically feasible), and the extent to which it must be demonstrated at each of the process stages: Identification, Business Case and Transaction;
   d. The identification of viable funding sources[40];
   e. Penalty clauses for non-performance (breach of contract);
   f. General guidelines for the management of potential, if any, fiscal risks[41];

[40] Lack of financing can impede the smooth functioning of PPP arrangements. Developing avenues for financing private investors is crucial to the success of that sector's involvement. In particular, well planned projects can add greater depth to the capital market, attracting bond and equity financing (Hilaire and Cotton 2011). Special purpose vehicles (SPVs) – a group of financial institutions – can also be used to finance large projects. The ultimate aim is to finance projects domestically and in domestic currency.

g. The allocation of risks, i.e. risk matrix;
h. Budgeting and accounting procedures for documentation in fiscal statements;
i. The treatment of unsolicited proposals (proposals advanced by the private sector without invitation from any Government agencies);
j. Contract renegotiation; and,
k. A termination clause.

2. ***Clear procurement guidelines will complement the PPP strategy.*** The Public Procurement and Disposal of Public Property Act became law in January 2015, to promote good governance in public procurement and the disposal of public property. Public money is at the centre of the procurement process; all entities that use public money come under the Act. Thus a private entity receiving a benefit or performing the function or providing the service and receiving public monies, including non-profit organisations, is subject to the Act (Riley 2017). In a bid to establish the Office of Procurement Regulation (OPR), certain sections of the Act were proclaimed in 2015, and the OPR was formed in January 2018. Implementation and enforcement of the Procurement Act can lead to greater efficiency in all facets of public enterprise, and by extension, can also ensure transparency in the tendering process and the awarding of contracts. Greater still, procurement guidelines coupled with explicit PPP policies can lead to the more efficient use of Government and private sector skills and resources.
3. ***Infrastructure gap analysis.*** Following on the heels of the Caribbean Development Bank's (CDB's) 2014 analysis of infrastructure deficits and gaps in the Caribbean, Trinidad and Tobago will do well to conduct a similar assessment, taking into consideration the current macroeconomic climate. In its investigation, the CDB analysed Trinidad and Tobago using the fiscal reality of 2012[42] – a stark contrast to what exists at present—and also limited the study to three sectors: electricity, transport and water and sanitation. An assessment of the level and quality of the existing (social) infrastructure is therefore still required for health, education, housing and inter-island transport[43]. The potential roles of both the public and private sectors in bridging the infrastructure gap should also be considered, with details provided on the investments to be made by each party.
4. ***The PPP Unit must be staffed and extensively trained.*** While a designated unit for PPPs is a step in the right direction, for the Unit to function efficiently and discharge its duties, a commitment must be made to the continuous training of its personnel, ensuring a skilled and knowledgeable team on all aspects of PPP design and delivery.

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[41] While not intended to replace the individual project assessment and its adherence to the PPP criteria and guidelines, the author proposes the use of the PPP Fiscal Risk Assessment Model (P-FRAM) for analysing project-specific fiscal risk. P-FRAM was developed by the World Bank and the Fiscal Affairs Department of the IMF, and allows its user to input country-specific macroeconomic data and detailed project information to estimate fiscal outcomes under different scenarios. Relevant information is used to quantify the short and medium term effects of a PPP project on the fiscal deficit and the debt stock, while sensitivity analysis can be performed, should key economic and project variables change. The software and an instruction manual can be freely downloaded, with further training available through technical assistance missions.

[42] Trinidad and Tobago had the fourth largest investment need of the 15 CARICOM countries assessed, but it was determined that given 2012 investment levels, and assuming a "business as usual" outlook, Trinidad and Tobago Central Government had ample fiscal space to discharge its capital expenditures – Trinidad and Tobago was deemed to have no infrastructure gap for the period investigated (2015 – 2025). Given falling public sector investment in the wake of depressed energy prices – the new normal – it will be interesting to see whether Trinidad and Tobago can still meet its public investment in the remaining years to 2025.

[43] CDB's study only evaluated the number of paved roads.

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