

Building Infrastructure in a Changing Economy

1.0 Introduction

This paper focuses on building infrastructure in a changing Economy.

Our economy has been dependent upon the good fortunes of oil and gas for many years. The recent sudden changes in this sector have yielded unanticipated consequences on all other sectors of our economy.

The oil and gas sector has been our economy's major foreign exchange earner. As such, we in Trinidad and Tobago have experienced the effects of peaks and troughs associated with the fluctuation in revenue coming out of the oil and gas sector.

Notwithstanding the effects of these peaks and troughs arising from oil and gas revenues, the construction sector still remains a key part of our economy. Infrastructural development, the construction of houses, new buildings, repairs and maintenance are ongoing activities that overtime vary in intensity with the country's revenue stream.

In this context, this presentation seeks to review the recent experiences and identify the role building infrastructure plays in a changing economy; the following areas will be discussed:

- 1. The Current Economic Challenges**
- 2. The Contribution of the Construction Sector to the National Economy**
- 3. The Impact of Infrastructure Construction on the Economy**
- 4. The Building Infrastructure and the Path Forward**
- 5. Conclusion and Recommendations**

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2.0 Current Economic Challenges

The present description of the economy is one that currently has a very low level of construction activities. This situation has generated no end of debate among industry players. Additionally it is doubtful that oil and gas revenues will return to what the country had experienced in the last decade.

In going forward our major challenge would be our ability to earn Foreign exchange, we must understand foreign exchange fuels our economy and the economy will further experience challenges once there is a limited supply of foreign exchange.

Another challenge is that the economic experts have started to recommend defensive prescriptions which include cutbacks in government spending. If an unplanned approach to restructuring government spending is adopted this action is likely to continue to impact the construction sector negatively.

Research have shown when the economic valve is closed off by cutbacks in public sector spending within the construction sector there will be a reverse multiplier effect on unemployment.

Also maintenance programmes tends to suffer as technocrats don't perceive maintenance as an income generating stream. As such, one will consequently expect an accelerated or shortened service life on our existing infrastructure asset, an example just to mention is the current state of deterioration on our road network and building assets.

The construction sector is one of the few sectors which today hold the promise of sustaining national economic development inclusive of supporting economic diversification away from oil and gas and would assist in the revitalization of our economy, while at the same time satisfying basic and urgent domestic needs.

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3.0 The Contribution of the Construction Sector to the National Economy

The construction sector is an important contributor to Trinidad and Tobago economy, for the recent period 2010 to 2015 the construction sector repeatedly accounted for approximately 5% of Trinidad and Tobago's GDP, fluctuating from 5.4% in 2010 to 4.7% in 2012.

The Ministry of Finance's "Review of the Economy 2015" indicated the sector accounted for 5.3% of GDP and was estimated to employ around 95,000 or 14.8% of the country's workforce.

The Trinidad and Tobago construction sector is often described as being formed by three major industries:

1. Building Construction
2. Civil & Infrastructure Construction
3. Energy and Industrial Construction

While the energy construction segment of the industry started to slow down at the end of 2014, following the drop in oil and gas prices, government led building and infrastructure activities continued to perform during 2015, noting that 2015 was an election year.

Even though there was a slowing down of construction activities after September's 2015, Central Bank data reported, based on cement sales a growth of 7.3% in the third quarter of 2015 was experienced, however in the last quarter of 2015 construction activity declined. During 2016 the sector continued to decline.

The current government continues to experience reducing cash flow due to the declining oil and gas revenues and a reduction of foreign exchange earnings; as such they adopted to review the public construction programme in their first year.

Today construction activities are no longer vibrant. The large private and public sector projects have either been completed or will soon be completed. Consultants and Contractors are now without new projects, and some firms have begun the reduction of their labour force.

Notwithstanding the current situation of the sector, there may be light at the end of the tunnel with the announcement by government of some major projects which are set to go ahead, some of projects mentioned are:

1. Proposed Highway to Manzanilla and the first class road to Toco with associated sea port
2. The Fishing Port at Mourga
3. The Completion of Highway to Point Fortin
4. The HDC housing construction programme

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5. The recently mention road network improvement programme

If these mentioned projects truly materialise with local lead participation an early positive impact to the economy will be experienced, however if foreign lead participation is allowed the sector will most likely experience prolong recovery.

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4.0 The Impact of Infrastructure Construction on the Economy

The construction of infrastructure works is considered to be one of the major mechanisms to stimulating economic growth. Construction plays an important role in the economic upliftment and development of a country. It can be regarded as a tool for generating employment and offering job opportunities to mass amounts of unskilled, semi-skilled and skilled work force.

Additionally construction has the potential for generating foreign exchange earnings derived from overseas trade in construction services, construction materials and engineering services; this was the experience when the industry ventured into the Caribbean territories during the mid 80's

When infrastructure projects are undertaken, example construction of a new road, water and sewer reticulation systems and bridges, these infrastructure assets creates a huge multiplier effect on the wider economy. Research conducted by the US Federal Reserve Bank indicates that a dollar spent on infrastructure, equates to an outcome which is greater than two dollars to the economy.

Likewise if we are to undertake the construction of light industrial parks, infrastructure and associated warehouse construction will not only generate employment directly through construction but also create an economic space where entrepreneurs can establish factories to manufacture goods and services for local consumption or export markets. These factories will employ more labour enabling workers the buying power to obtain goods from the market etc., creating a virtuous cycle.

If we examine the construction components of developing a light industrial park, most of the material inputs are sourced or manufactured locally. The only major materials input which may be required to imported would be rebar for associated concrete structures and structural steel for the factory shell framing. If projects of this nature are pursued, completed facilities can be used to support Agro-processing industries which have the potential of generating foreign exchange.

The multiplier effect created by the construction of infrastructure works has the potential to touch a wide and diverse cross section of the population.

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5.0 The Building Infrastructure and the Path Forward

The period for undertaking monumental and or legacy projects can no longer be afforded. Our proposed construction projects must be linked to delivering an economic, financial or social outcome in the short, medium or long term.

Any strategy to organise and propel the construction sector using infrastructure construction must first define clearly the outputs and projects to be delivered. These planned construction projects must be prescribed and prioritised by the country's national development plans. The sectors for generating foreign exchange should be given priority , example Agriculture, Manufacturing, Tourism which all have the potential of earning foreign exchange.

Given our foreign exchange earner challenges, a serious and thorough survey and inventory of natural resources needs to be undertaken with specific focus on construction materials, example quarry products and timber. Timber should also be explored as a potential industry which can be revitalized and developed, the potential of downstream timber production can be a stream for foreign exchange.

With respect to quarry products, within the last ten plus years we have seen an upsurge in the importation of aggregates from regionally and extra-regional countries. With our foreign exchange shortage, we must pursue our untapped aggregate reserves and organize our sector to harvest these reserves to support our upcoming infrastructure construction projects and thereby conserve foreign exchange.

Designers must have a concerted drive to maximise the utilisation of local construction materials. This would in turn stimulate local production, ultimately reduce construction cost and produce engineering works more appropriately integrated with our social and economic environment.

In moving our construction sector forward, we must develop an integrated programme through our existing institution such at UWI, UTT or CARIRI to facilitate research and development in an effort of creating and improving local construction materials and process.

While we continue to erect structures and generate construction activities, we urgently need to establish the much talked about national building codes, this would ensure construction works undertaken will remain in service for as long as was intended.

A serious review of the present approach to the training and certification of trade and craftsmen is also needed if we are to undertake technically challenging construction projects, we need to develop a highly skill workforce, we must follow our sub-sector in Energy and

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Industrial Construction which have successfully organized their manpower training and certification needs.

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6.0 Conclusion and Recommendations

In conclusion, the building infrastructure in a changing economy has the unique potential of generating and maintaining a level of employment and a quality of life unchallenged by the other sectors of the economy, it also has the potential of supporting the earning of foreign exchange.

The experience of Trinidad's economy with its historic dependence on oil and gas being the dominant economic sector is not unique. Our problems are the same problems which many countries have faced.

A systematic approach to building infrastructure is being recommended here for Trinidad in this period of reflection.

The following recommendations are being proposed for consideration:

1. A national survey and inventory of local construction materials available for use in infrastructure construction, example the quality and quantities of aggregates and timber available.
2. Development of an integrated approach to research and development of indigenous construction materials to support infrastructure construction.
3. Based on the national development plan, establish priorities for construction projects. Projects with the greater return to be treated as first priority.
4. Accelerate programmes for training and certification of trades and craftsmen to support Building Construction, Civil & Infrastructure Construction.
5. State recognition of the importance and potential of the construction sector as a vehicle of growth and development and the need for locally lead participation.
6. Development and encouragement of the linkage between the construction sector and other related sectors of the economy e.g. banking / financial sector to support the project delivery model example 3'Ps
7. The establishment of a national building code to ensure our future investments the sector are protected with well-engineered construction.

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I thank you and hope my contribution this afternoon would make progressive changes towards the development of our nation as we move forward in this changing economy