The Price Paid: Free Higher Education

In Trinidad And Tobago Re-Examined

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Submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
under the Executive Committee of the
Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY
2016

ABSTRACT

THE PRICE PAID: FREE HIGHER EDUCATION

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This dissertation examines the effect of the Government Assistance for Tuition Expenses (GATE) Program on the employment outcomes of graduates in Trinidad and Tobago. Having implemented a tuition-free higher education system in 2006, the Trinidad and Tobago government expected that removing the major cost associated with post-secondary education would not only have resulted in the massification of higher education, but would have been the driving force behind becoming a developed country.

A mixed methods approach is used combining analysis of an online survey of graduates of the GATE program, together with interviews of graduates, and other stakeholders. A purposive sampling of post-secondary graduates of the GATE program residing in Trinidad and Tobago yielded a sample of 746 graduates. These graduates responded to an online survey instrument, and 15 of these graduates participated in subsequent semi-structured interviews. Additionally, 5 university administrators, 3 business executives and 5 government officials were interviewed using a semi-structured instrument.

Findings from this study indicate that of the 90.1% of the graduates forming part of the survey sample perceived that they were overeducated. Among the interview participants, it was discovered that some of their overeducation stemmed from the structure of the local labor market, both in the types of jobs available and the role the government plays in the labor market. The dissatisfaction graduates expressed with their jobs after graduation has resulted in a 'degree epidemic', with graduates consistently pursuing additional degrees in search of that one permanent job which suited the skills they possessed.

Additionally, the study identifies a misalignment between the goals of the GATE program and the requirements of the labor market. While initially being portrayed as a means of increasing the higher education participation rate and creating a knowledge-based society, GATE became identified as just another social program offered to the public without charge by the government. Provision of tuition-free higher education was thus merely the means by which the government attempted to secure votes from the population to maintain political power.

With spending by the government towards the GATE program approaching TT$6 billion by the 2015 fiscal year, GATE not only provided higher education to the country's citizens, but was also a substantial source of funds for both public and private higher education institutions. The findings of this study suggest that the true beneficiaries of the GATE program were the myriad private institutions offering programs of study funded by GATE. With lax oversight by the supervising agency, and little integrated policy direction being offered by the government, private institutions created an industry of low quality programs offered at higher costs when compared to programs being offered by public higher education institutions. The supply of these qualifications offered by the private sector coupled with their chase to increase enrolment and thus increase the revenue they derive from the government, has resulted in an increase of graduates whose qualifications on paper do not match the skills they have obtained in these programs.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACTT	Accreditation Council of Trinidad and Tobago
CAPE	Caribbean Advanced Proficiency Examination
CARICOM	Caribbean Community
CEPEP	Community Environmental Protection and Enhancement Program
COSTAATT	College of Science, Technology and Applied Arts of Trindad and Tobago
CSEC	Caribbean Secondary Education Certificate
CSO	Central Statistical Office
CVQ	Caribbean Vocational Qualification
CXC	Caribbean Examiniations Council
ESD	explanatory sequential design
GATE	Government Assistance for Tuition Expenses
GDP	Gross Domestic Product
GOTT	Government of the Republic of Trinidad and Tobago
HELP	Higher Education Loan Program
ICTA	Imperial College of Tropical Agriculture
IMF	International Monetary Fund
LEC	Legal Education Certificate
LLB	Bachelor of Law degree
MBA	Master of Business Admninstration
MOU	Memorandum of understanding
NIHERST	The National Institute of Higher Education for Research, Science and Technology
OJT	On The Job Training Program
PNM	People's National Movement
PRELAC	Regional Education Project for Latin America and the Caribbean
QRC	Queen's Royal College
SEA	Secondary Entrance Examination
SRLF	Student Revolving Loan Fund
TLI	Tertiary Level Institution
TSC	Teaching Service Commission
TVET	Technical Vocational Education and Training
UCWI	University College of the West Indies
UNC	United National Congress
URP	Unemployment Relief Program
UTT	University of Trinidad and Tobago
UWI	University of the West Indies

ACKNOWLEDGEMENTS

This dissertation is dedicated to all those persons who have dared me to dream big despite my circumstances. Growing up in Trinidad in the humblest of communities, I believe that I have shown that great things come to those who persist despite the countless obstacles placed to distract from your purpose. From that day in 1990 when a primary school teacher told her class that the reality was that many sitting in that classroom will be born, attend school, live and die in Morvant, I was determined to prove her wrong and this accomplishment is but one example of me beating the odds.

This journey has been an arduous one, and would not have been possible without Dr. Gita Steiner-Khamsi who adopted me when all seemed lost and said to me "let's get you out of here!". Thank you for your many words of encouragement that have sustained me when I thought this was beyond my abilities. Gratitude must also be expressed to Dr. Mun Tsang who took me under his wings to work along with Gita to get my proposal completed and successfully defended. Dr. Michelle Knight-Manuel, thank you for giving me the opportunity to present with you, be a part of your research teams and for the consistent encouragement on the many train rides to and from research sites as we drained ourselves to improve the lives of black and latino young men in New York City. This feat would not be possible without the assistance of Dr. Felicia Mensah, Dr. William Baldwin, Dr. Oren Pizmony-Levy and Dr. Bernhard Streitwieser. Thank you all for your flexibility and patience in making this happen.

I am truly indebted to the staff of the Office of the General Counsel at Teachers College, who for five years sheltered me and provided in ways you will never imagine. Thank you Lori, Althea and Viktoria. You have always been sources of encouragement.

This would not be possible without the many friends who have been supporting me through thick and thin, through every trial and tribulation. Dr. Hakim Williams, a friend of over 24 years, you have been more like a brother. Thank you for always being there to answer a call, read a draft, return a message and be a source of epic laughter always. To Lance, Ricardo, Shaka, Marcus, Joel, Charlene, and Kionna, this is for you as well. Your support through the years have been invaluable.

To LaVerne, Kizzy, Gershaine, Maurice, Chivon, Marisa, Curtis, Anson, Kristopher, Sasha, LaTiesha, Reesa, and Anthony, I love you guys. Thank you for the many sacrifices made so that I can realize my dreams. Love you guys. Thank you daddy, Anthony Streete, for all your support over the years. Thank you AE for all your encouragement. To my many aunts and uncles this is for you as well.

Last but not least, these pages are dedicated to three women who sacrificed so much for me without ever seeking anything in return. Sad that I can’t share these pages physically with you my top supporter - my grandmother, Hilda Fraser, who was the first person to make me aware of my intellect and the great things in store for me. To Aunty Marcia you have been a rock of support, even in your absence I feel you cheering me on. Thank you for the unconditional love. To my heart, my mother – Sandra Rigsby-Streete, this one is for you. You sacrificed so much to make the impossible possible. Whether it meant borrowing money to make sure I could

make it to high school or pushing me on when you could not physically provide. A smile on your face and pride in your heart has been my eternal quest. Love you.

Ultimate praise goes to my Creator without whom none of this would have been possible. That a poor boy from Morvant could dream and hold on to You and achieve these heights is humbling.

DEDICATION

This dissertation is dedicated to my family and friends. Thank you for every ounce of support. I persevered though the grueling hours, numerous trips, never-ending readings and countless doubts, all to motivate my nieces and nephews, those here and those yet to come. This is for you – Camisha, Aaliyah, S'rai, Jabari, Lashaun, Amani, Isaiah, Sariah, Destinee, Kymorah, Adriano, Kristiano, Thiago, Jaheim, Kymani, Jaydon, and those yet to come.

Chapter 1

Introduction

> *"Excess capacity in the labor market has fallen with the unemployment rate dipping to 3.7 percent in 2013 Q1 and with relatively solid growth since then. Although there appears to be significant underemployment among low-skilled government workers, employers report shortages of skilled labor, which could pressure wages higher." (International Monetary Fund, 2014)*

Having implemented a tuition-free higher education system in 2006, the Trinidad and Tobago government expected that removing the major cost associated with post-secondary education would not only have resulted in the massification of higher education, but would also have redounded to the benefit of the Trinidad and Tobago economy through the addition of a significantly larger pool of highly educated and skilled individuals to the economy. This study examines the impact a system of free higher education in Trinidad and Tobago has on the returns to education in that Caribbean country, as well as, its impact on the employment outcomes for the resultant increase in higher education graduates.

In its 2014 Article IV Consultation of Trinidad and Tobago, the International Monetary Fund (IMF) highlighted the paradox in the Trinidad and Tobago economy wherein despite high underemployment in an economy that is at or approaching full employment with an unemployment rate of around 3.7%, there still exists a scenario where skilled labor is scarce. This is of particular note in a country where for the past decade higher education has been provided to its citizens tuition-free. While government officials have been obsessed with touting low unemployment rates, greater attention needs to be placed on the quality of jobs available and generated, and the ability of the labor market to fill these jobs.

Unlike its Caribbean counterparts, Trinidad and Tobago relies little on tourism as a source of revenue, and more on oil and natural gas production. Striving to maintain its position as the Caribbean Community's (CARICOM) economic power, while also positioning itself on the world stage as a 'developed' country, Trinidad and Tobago has invested heavily in education. Whether through its recent policy decision on the adoption of universal early childhood education, to its early adoption of universal primary and secondary education ahead of its Latin American and Caribbean counterparts, and lately creating free access to post-secondary education (Government of Trinidad and Tobago, 2011), GOTT in the 2015 Fiscal Year, has spent approximately 16 % of its national budgetary allocations on education and training – the largest sectoral allocation in the budget (Government of Trinidad and Tobago, 2014). This has been in keeping with spending over the past decade that has seen Education, National Security and Health being the largest recipients of the country's resources.

As a signatory to both the 1990 Jomtien and 2000 Dakar Frameworks to Education For All, Trinidad and Tobago has in the last ten years indicated that it has met the goals of providing universal primary and secondary education. Having achieved universal primary and secondary education, in 2009, the GOTT declared its intention to provide universal early childhood education and embarked on a mission to start building these schools.

In attempting to implement the policy mandate of Education For All, as derived initially from the World Declaration of Education For All in Jomtien, Thailand in 1990, by the Dakar Framework for Action, ten years later, and further by the Regional Education Project for Latin America and the Caribbean (PRELAC) arrived at in Havana, Cuba in 2002 by Ministers of Education from the Latin America and the Caribbean, Trinidad and Tobago – with a windfall from high world oil and natural gas prices at the turn of the twenty-first century, took a policy decision to engage in what can best be described as accelerated EFA. In 2003, through its policy framework document known as “Vision 2020”, GOTT set itself the goal of becoming a developed country by the year 2020 (Government of Trinidad and Tobago, 2011). This Vision 2020 document and its derivative goal of becoming a ‘developed’ country, served as the impetus for the government’s drive towards universal pre-school and university education.

Higher education was seen as the means by which not only a “knowledge-based economy” would have been achieved, but also as an essential precursor to a culture which celebrated lifelong learning, upon which the new Trinidad and Tobago society was to be based.

> All successful economies are built on knowledge and higher education (especially in science and technology), a focused research capability, and systems to support innovation. If there is to be sustainable development in Trinidad and Tobago, a tertiary education culture of lifelong learning and training must include all sectors of society. (Government of Trinidad and Tobago, 2003, p. 3)

Background and Context

Historically, higher education in the Caribbean has been reserved for the elites in the society, and has not been available in any large quantity to the average citizen until well after the end of the second World War. An understanding of the current higher education landscape in Trinidad and Tobago requires an acknowledgement of the history of higher education in the country.

History of Higher Education in Trinidad and Tobago

Prior to the occupation of Trinidad by the British in 1797, Trinidad was ruled the Spanish and French. With no higher education institution being established in the English-speaking Caribbean region until 1743 with the founding of Codrington College in Barbados to train the priesthood in the region (Cobley, 2000), the sons and in limited situations the daughters of the plantation owners and other elites in the colony were sent to England and France to pursue university education (Campbell, 1996). Codrington College would not start to grant formal degrees until 1875, under the auspices of an English university - the University of Durham (Cobley, 2000).

It would not be until 1921 with the establishing of the Imperial College of Tropical Agriculture (ICTA) in Trinidad, that the Anglophone Caribbean would see its second post-secondary institution and Trinidad its first. The ICTA's mission was to prepare Englishmen, from the metropole, in the science of agriculture in order to improve sugarcane yields in the

West Indies and prepare them for enterprise in Africa. The most local Trinidadians could expect from the ICTA was a diploma – and this was reserved for the society’s elite (Campbell, 1992, 1996; Cobley, 2000; Miller, 2000; Pemberton, Ragbir, & Pemberton, 2000).

In a political atmosphere charged by two World Wars which saw several members of the Trinidad society aiding the British forces and thus marking the increase of locals beyond the white males of the elite class migrating to England, there was a fear that these locals and their counterparts throughout the Caribbean could lead to a challenge of the British stranglehold on the islands. This particularly arose as more locals outside of the elite plantation class were being exposed to university education in England and the United States (Campbell, 1997). In 1948, the University College of the West Indies (UCWI) would be established in Jamaica to serve the higher education needs of the West Indian islands (Cobley, 2000). UCWI would grant degrees through the University College London.

Having it’s citizens pursue higher education abroad, it was not until 1960, when with independence already in the air, that Trinidad and Tobago would be able to convince the colonial power of the need for a branch of the UCWI in Trinidad. Up to that point, Trinidad only had access to agricultural education through the ICTA, and with a burgeoning oil industry – Trinidad was the most industrial of the Caribbean islands. The University of the West Indies (UWI) – St. Augustine campus was thus established to provide higher education in the social sciences and engineering (Campbell, 1997).

According to Williams and Harvey (1985), with a haphazard approach to research in the increasingly-industrialized country, it was felt by GOTT that greater coordination was necessary in both government spending in the areas of research and technology, and the work of individual ministries. The National Institute of Higher Education for Research, Science and Technology (NIHERST) was thus created in 1977. NIHERST represented Trinidad and Tobago stamping its independent and republic status in the area of higher education, since UWI was a regional institution and there was no direct control over its functioning by GOTT. NIHERST also came at a time when the country was experiencing its first ‘oil-boom’, which saw national revenue from the production and export of oil significantly transform the country’s revenue.

Beginning in the mid-1980s with the demand for short courses focusing on word processing skills and eventually the certification of basic computer skills, the country would see the emergence of an unregulated private sector providing post-secondary education. By 1997, it was estimated that there were some fifty five (55) private TLIs (Alleyne, 1997) offering some form of post-secondary qualification, often through some affiliation with English, Canadian and to a lesser extent, American TLIs - usually for-profit institutions.

By 2000, the public higher education sector experienced minimal growth, primarily through the establishing of technical schools offering vocational qualifications, and NIHERST being realigned to provide associate degrees in fields such as nursing, health science and business management (Paul, 2000). Beginning in 2004, with increased revenue from oil and natural gas production, a push towards being a developed country by 2020 as identified in the Vision 2020 policy document, and GOTT recognizing the need for a better skilled population and the role higher education would play in bringing this about, three fundamental reforms were implemented:

i) the creation of a new public university: The University of Trinidad and Tobago (UTT); which would partner with foreign universities to accredit programs in science, technology and research in the hydrocarbon industries upon which the country's economy was based;

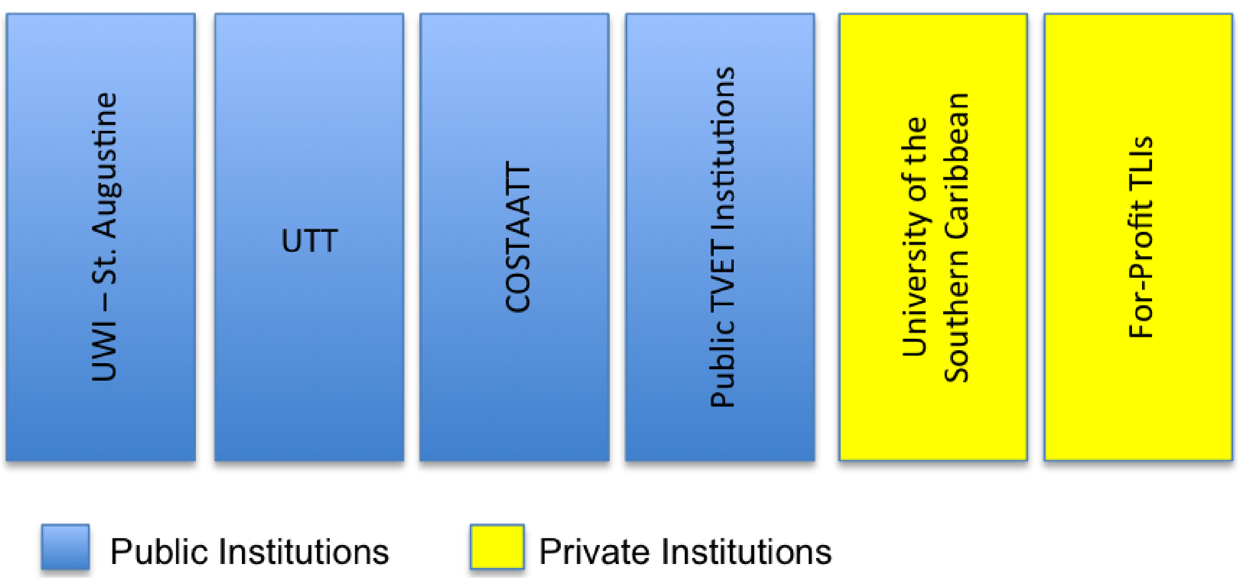
ii) the creation of the College of Science, Technology and Applied Arts of Trinidad and Tobago (COSTAATT), which brought together the myriad teacher education programs and technical certification programs, previously operated by NIHERST. COSTAATT initially took on the form of a Community College system with seven campuses throughout the country, but by 2011, to respond to a spike in demand for higher education, was granting some bachelor degree programs;

iii) Recognizing the need to "rope in" the burgeoning private higher education sector that was quickly developing into 'diploma mills', the Accreditation Council of Trinidad and Tobago (ACTT) was created to accredit and register all TLIs in the country.

Currently, the higher education sector in Trinidad and Tobago consists of both a public and private sector. The public sector consists of the UWI – St. Augustine (a regional institution operated by CARICOM governments with significant local funding); the

University of Trinidad and Tobago (UTT); COSTATT; and myriad technical schools providing technical and vocational training for the petroleum, natural gas and construction sectors. The private sector comprises of one large not-for-profit university, the University of the Southern Caribbean, and a large number of smaller for-profit institutions that grant diplomas and degrees that are 'franchised' from institutions mostly located in the United Kingdom, Canada and Australia (see Figure 1.1).

Figure 1.1 Composition of Higher Education Sector in Trinidad and Tobago



Source: Author

History of Higher Education Finance in Trinidad and Tobago

As highlighted previously, with the advent of TLIs being of recent vintage in Trinidad and Tobago, for much of the history of the country, gaining a post-secondary qualification involved locals having to migrate usually to England, France or the United States. In fact, the Chinese immigrants to Trinidad were even known to have sent their sons to China to pursue higher education at the turn of the twentieth century (Campbell, 1997).

With no TLI located on the island until the establishing of ICTA in 1921, the colonial government would not get involved in the financing of higher education until 1863 through the provision of Island Scholarships, which provided locals, albeit usually white, male elites, to study at Oxford and Cambridge Universities in England. These scholarship winners were drawn from the one all-male public secondary school at the time, Queen's Royal College (QRC); or the few denominational secondary schools, usually Roman Catholic, that existed at the time. At the turn of the century, students from the lower socioeconomic levels of the country, the children of freed African slaves and indentured Indian immigrants, had limited access to the secondary schools (Miller, 2000) in existence, and thus were not reflected in the Island Scholarship winners until well into the 20th century. QRC which offered limited space to lower SES locals, would remain the only public secondary school until 1953 when the government opened the co-educational St. George's College.

These Island Scholarships were very competitive and limited in number, in most years not surpassing five awardees. In 1974, with an upswing in the price of oil, the government would provide some twenty scholarships for citizens to pursue foreign education in petroleum and related fields (Campbell, 1997) to bring some local expertise to an industry that depended on foreign human capital for its expertise. By 1976, the year of the country's attainment of republican status and full separation from the British, there was an increase in the number of awardees from ten to nineteen in the Island Scholarship program (Campbell, 1997) – these winners were still proceeding to Oxford and Cambridge – still the gold standard for higher education in the new republic.

According to Hosein and Tewarie (2007), it was not until 1973, that focus was placed on providing direct subsidy to underwrite the cost of attending the one locally-based university, UWI St. Augustine, through the creation of the Student Revolving Loan Fund (SRLF). This loan used to fund students pursuing higher education at home, was restricted to being applied to "selected areas of study" (p. 9). Other than providing infrastructural and operational support to UWI, this was the first assistance being provided to local students to pursue higher education at home, and came at a time in Trinidad and Tobago when local consciousness was at a high as a result of the Black Power movement, which also coincided with unseen wealth as a result of high oil prices on the world market. The SRLF would be expanded in subsequent years as local TLIs expanded or as developmental needs required students to pursue higher education at other branches of UWI in Barbados or Jamaica.

Throughout the 1970s, in the midst of an oil boom, higher education in Trinidad and Tobago while technically being free as tuition costs were met by the government, students were required to pay fees. Because, so few children of lower SES were able to gain access to secondary school, higher education was not only the domain of those who could access secondary school, but added to that, was reserved for those who could afford the fees directly or through loans because of their parents relative wealth either as senior public servants, management in private sector enterprise or by means of a scholarship. It would not be until 1989, that GOTT would formalize higher education financing by establishing the Student Cess Act (Hosein & Franklyn, 2011; Hosein & Tewarie, 2007).

The Student Cess Act was passed in 1989, when the country was in the throes of an economic recession and under the control of the structural adjustment policies of the International Monetary Fund (IMF). The GOTT was expected to meet the operation costs of UWI in Trinidad and Tobago. To offset the financial cost of providing spaces at UWI in Trinidad and Tobago for locals, GOTT decided through Cess to require that students carry the burden equivalent to 10% of the costs (Hosein & Tewarie, 2007), which in 1989 was TT$2,400. (roughly USD$400). Students who were unable to meet this cost were able to approach the local commercial banks for a GOTT-guaranteed loan, which was payable upon graduation.

Particularly in the face of tight economic times, it was important for the government support the students who were pursuing university education. The selectivity of university attendance at that time and its burden on the education budget was best characterized by the former government minister, Lenny Saith (1992), in his contribution to a debate in the Parliament of Trinidad and Tobago on September 4, 1992, seeking to amend the Student Cess Act:

> Let me put that in the context of the money that is being spent by the Government on education. In 1988, the Government spent $773 million on

> education, primary, secondary and tertiary; 1989, $708 million; 1990, $727 million; 1991, $808 million; 1992, $873 million… There are 190,000 primary school children and 98,000 secondary school children in the country, and roughly 3,800 Trinidad and Tobago university students at UWI. So the number of students at UWI, as a percentage of the total number of students in the educational system is approximately 1.5 [per cent]. What we are basically doing is spending 14 per cent of our education budget on 1.5 per cent of the student population in tertiary education (p. 98).

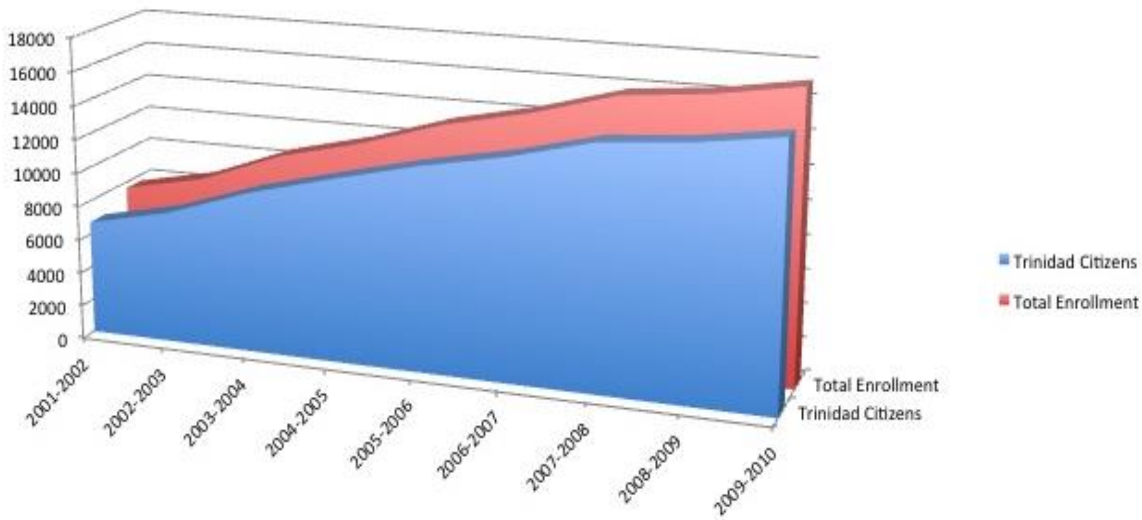
To address the fact that providing higher education for so few citizens was costing GOTT so much, the United National Congress (UNC) government in 2001 instituted the Dollar For Dollar Education Plan. Dollar For Dollar's goal was to "make tertiary education affordable [and] to widen access to tertiary education to support economic development and promote social equity" (Karim, 2011). In that program, the government loaned 50% of funds for university tuition (Hosein & Tewarie, 2007). This loan applied to attendance in public and private TLIs. Criticism of this plan centered around the fact that the only students who would qualify for the plan would be those whose parents had the initial 50% to contribute. Access to higher education was thus further stratified along class lines. "It did not promote social equity" (Hosein & Tewarie, 2007, p. 11). The stated goal of Dollar For Dollar was to increase the higher education participation rate to 20% (Hosein & Franklyn, 2011; Hosein & Tewarie, 2007).

In December 2001, the government changed and the People's National Movement (PNM) assumed leadership of the country. As part of its election promises, the party promised to increase access to tertiary education for students whose parents did not have the means to qualify for a student loan. The PNM converted Dollar For Dollar to GATE in

September 2004, However, this version of GATE simply converted the Dollar For Dollar loan to a grant. Therefore, through this iteration of GATE, GOTT assumed the cost of 50% of a student's tuition cost, though only in public TLIs. "The objective of GATE was to reduce the social inequity in terms of access to tertiary level education by low-income groups in Trinidad and Tobago" (Hosein & Tewarie, 2007, p. 12). Private TLIs complained bitterly that this would be the 'death-knell' for their institutions as they would not be a favorable option as students attending their institutions would be required to fully fund their tuition.

With the scarcity of publicly available data for enrolment among TLIs in Trinidad and Tobago, particularly in Private TLIs, enrolment data from the UWI St. Augustine campus, the largest university in the country, shows a continued increase in enrolment at the institution as GOTT funding to subsidize the financing of tertiary education was implemented and expanded after the implementation of GATE in 2004 (Figure 1.2). Whereas UWI St. Augustine took over 54 years to get to a student body of 8,000 students, in six short years after the introduction of GATE, enrolment at the institution effectively doubled. This doubling of enrolment was led by enrolment of students from Trinidad and Tobago, with minimal increase of other students from the Caribbean region on the campus.

Figure 1.2: Total Enrollment at UWI St. Augustine 2001-2010.



Source: UWI St. Augustine Student Statistics and Annual Reports

The premise of developed-country status was predicated on an intention to truly have Education For All, through the provision of universal early childhood, primary, secondary and tertiary-level education. With enrolment rates in 2000 of 92% and 71% in primary and secondary school respectively, GOTT set itself the herculean task of achieving a 60% participation in tertiary education by the year 2020 (Government of Trinidad and Tobago, 2004; Hosein and Franklyn, 2011). In pushing towards its goal, the GOTT in 2006 expanded its higher education funding program, GATE, to provide full tuition funding for all citizens matriculating in a government-recognized, tertiary level institution (TLI) in Trinidad and Tobago and the English-speaking Caribbean.

GATE, by providing full coverage of tuition expenses for citizens, increased participation in higher education for students who otherwise would have been unable to afford a post-secondary education. GATE provides funding for 100% of undergraduate tuition fees at both public and private TLIs in Trinidad and Tobago and the Anglo-Caribbean, and a further 50% of tuition for citizens pursuing postgraduate degrees at public TLIs in Trinidad and Tobago and the Caribbean. Students wishing to pursue funding for postgraduate education at private local TLIs can access up to 50% or a maximum of TTD$10,000.00 per semester (USD$1.00 = TTD$6.30), of their tuition fees (Parliament of the Republic of Trinidad and Tobago, 2013). Students graduating with a First Class Honors undergraduate degree or its equivalent, are entitled to full funding of tuition fees associated with Masters and Doctoral degrees at any institution, including foreign ones, with government approval. In the words of the former Prime Minister, Patrick Manning, it is thus possible for a student to go from “nursery to tertiary…ABC to PhD” at no personal cost for tuition (Parliament of the Republic of Trinidad and Tobago, 2011).

Unlike the introduction of other education policies, the then government made no reference to foreign educational systems as evidence of success and to display the expected impact of its decision to provide free tertiary education for citizens of Trinidad and Tobago. With the budget speech taking on a political flavor in the post-independence society, GATE was referenced as a victory for the ‘small-man’ and a boon to the burgeoning youth demographic (whose slice of the electorate in recent years have become significant).

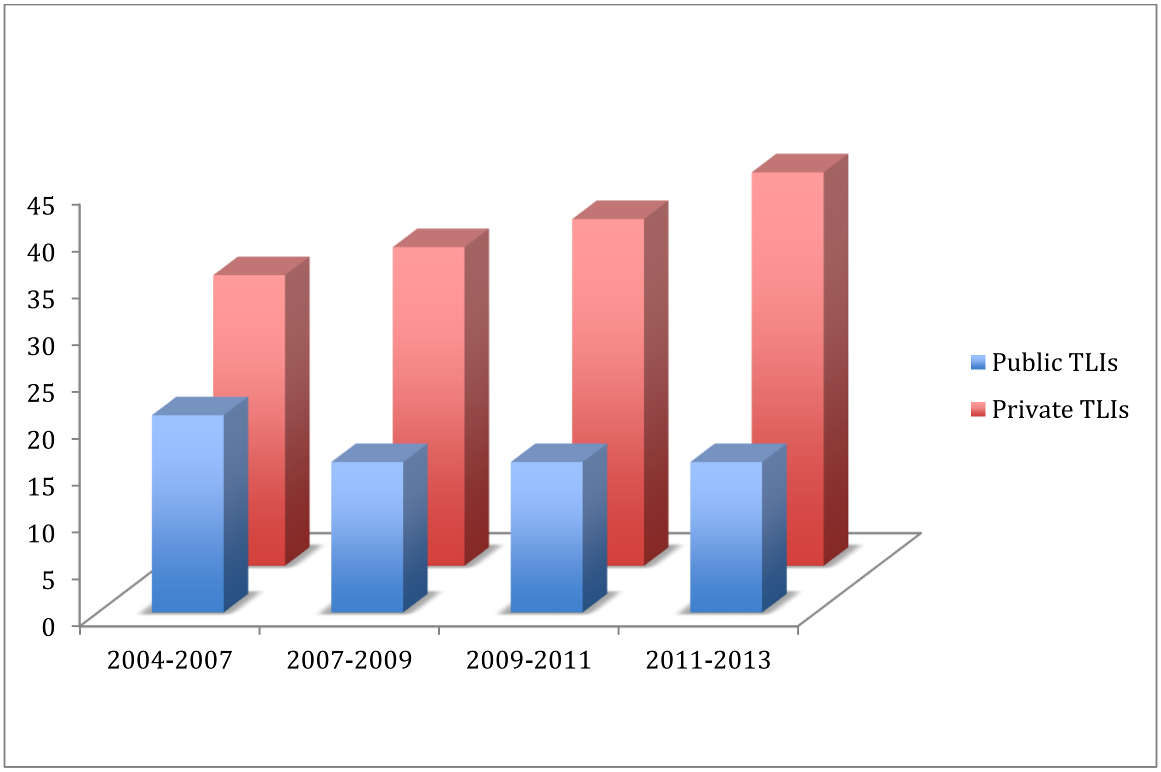
Further, in 2006, SRLF was replaced by the Higher Education Loan Program (HELP) which provided GOTT-guaranteed student loans issued by local commercial banks to offset the cost of fees, books, accommodation, travel and other related expenses. This HELP loan had an annual cap of TT$25,000 for study at local institutions, and TT$75,000 at approved regional TLIs (Hosein & Tewarie, 2007).

Not only did GATE increase the number of students receiving government funding to pursue higher education, but it also resulted in an increase in the number of institutions offering post-secondary education which were approved by GOTT to receive GATE funding. This increase in the number of institutions is noticed particularly in the number of private TLIs approved for GATE funding (Figure 1.3). Due to consolidation in the public sector as smaller public institutions were brought under the COSTAATT and UTT umbrellas, the total number of public TLIs over the period analyzed in Figure 1.3 was reduced.

These public TLIs despite their shrinking number, were large institutions when compared to the private TLIs. With minimal prequalification for private TLIs to admit students and access GATE funding, these institutions continued to grow in number. The fact that an institution could be created to offer simply one diploma program funded by GATE, the number of private institutions continued to increase as higher education was increasingly seen as a rewarding business. Opponents to GATE have pointed to the commercialization of higher education through the unhindered funding of programs created by these private TLIs and the proliferation of private institutions consisting of less than 100 students as some of the failings of the program. By continually offering new GATE-funded programs, these private

TLIs are seen by critics of GATE as contributing to an oversupply of persons with qualification of varying quality, thus lending to overeducation.

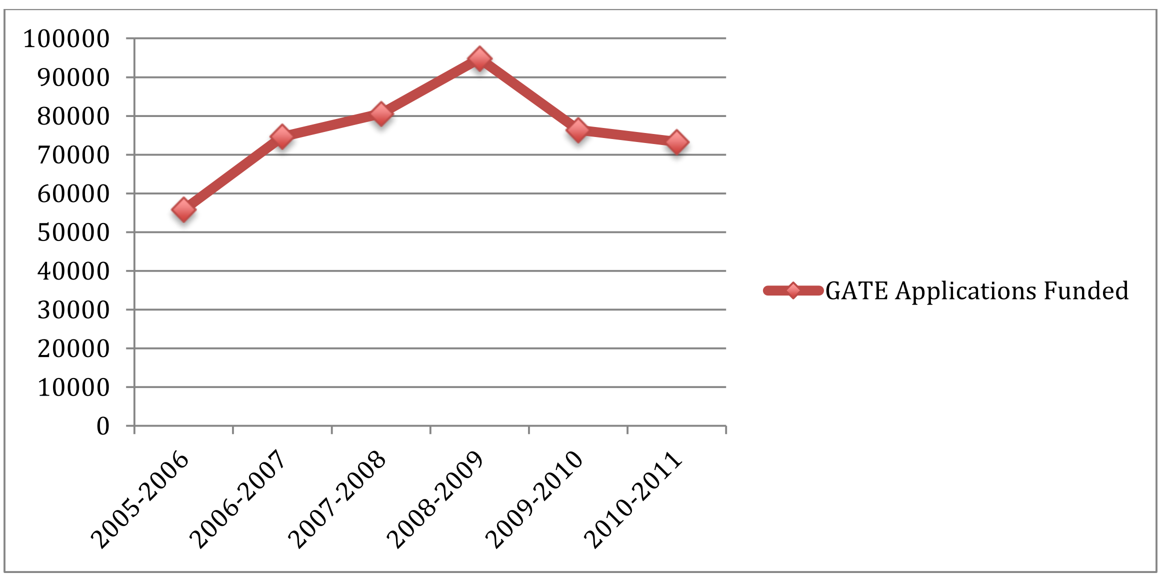
Figure 1.3 Number of GATE Approved Public and Private TLIs (2004-2013)



Source: Ministry of Science, Technology and Tertiary Education, (2011)

Concomitantly, the increase in the number of Private TLIs (as displayed in Figure 1.3 above), the number of applications funded each year (Figure 1.4 below) and the increased tuition costs in Public TLIs over time, has resulted in increased allocations to account for GATE funding of post-secondary tuition costs over time (Figure 1.5 below). The increasing financial demand GATE places on the annual budget of Trinidad and Tobago is of note particularly when one takes into consideration the IMF's concern of growth prospects for the economy in light of falling global oil and gas prices, and the generous and high levels of social programs and subsidies (International Monetary Fund, 2014). Figure 1.4 shows the consistent rise in the number of students funded by GATE from 2005 through 2011. The 2008-2009 financial year served as the peak for applications funded, following which a decline is observed. This post-2009 decline can be explained as the point at which the novelty of a free higher education would have reached its saturation point. Persons who were non-traditional students, those who would have left secondary school years before, would have all received their post-secondary education if they were unable to fund it prior to GATE. Post-2009, these non-traditional students would have formed less of the GATE-funded population, explaining the decreasing number of persons receiving GATE funding.

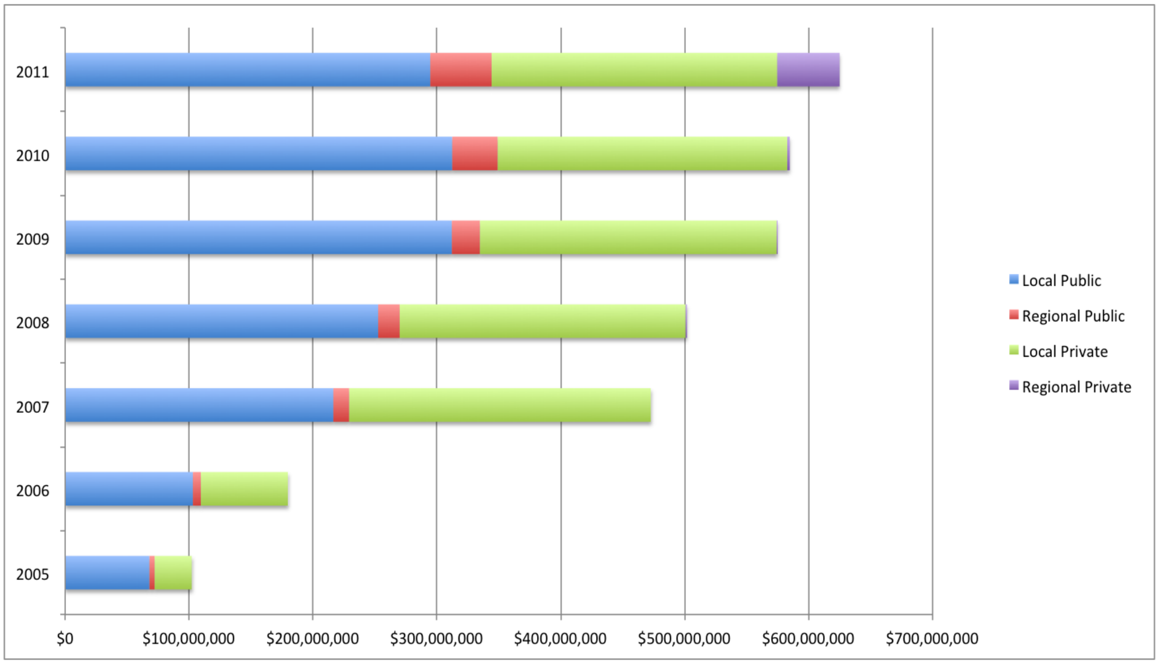
Figure 1.4 Number of GATE Applications Funded (2005-2011)



Source: Ministry of Science, Technology and Tertiary Education (2011)

With enrolment increasing between 2005 and 2009, there is also an increase in the cost to GOTT of operating the program (Figure 1.5). The significant increase in the funding of the program from GOTT observed in the 2007 financial year, can be explained by the fact that in the 2006-2007 academic year GATE moved to providing 100% of tuition costs for citizens. With full funding being available for studies within Trinidad and Tobago and throughout the Caribbean, spending to fund higher education at regional public and private TLIs is also observed. Of note in 2011 is the noticeable increase in funding towards regional private institutions which is represented primarily by the decision to increase the number of local students studying medicine at St. Georges University in Grenada. Additionally, Figure 1.5 highlights the fact that despite a decrease in the number of students being funded by GATE (Figure 1.4), the rising cost of tuition saw GOTT not experiencing any reduction in spending on the program as a result of smaller total enrolments.

Figure 1.5 GOTT spending on GATE program, in Trinidad and Tobago Dollars. (US$1.00 = TT$6.30)



Source: Karim (2011).

Research Problem

Little analysis has been done by the GOTT as to whether its investment in GATE has been resulting in the employment outcomes its intended recipients anticipate, and further whether the higher education financing program represents an efficient use of the country's resources; or even, whether such expenditure is sustainable in the long-term. GATE was further expanded in 2010 to include the full funding of post-secondary Technical Vocational Education and Training (TVET) and with talk of further expansion to include full funding of postgraduate programs in 2014 (Espinet, 2014), this continued expansion of GATE with limited policy and economic analysis, simply to achieve an electoral advantage against the political party not in power, can have dire consequences not only in light of declining oil and gas reserves and prices, but also as a result of an unclear justification for the program's existence.

Supporters of the GATE program claim that by offering funding for higher education without much preconditions, GOTT is ensuring that the country's wealth is allowed to 'trickle down' to every citizen. Additionally, these supporters of the program highlight the fact that increased spending in the higher education sector by GOTT, has created a new industry with increased opportunities for employment in this sector and the growth of businesses which benefit from spending by these institutions. On the other hand, opponents of the GATE program argue that despite the lax qualifications for being admitted to a GATE-funded program, a select, privileged segment of the population gains access to the best schools, and those with little resources are largely relegated to remain in that position because they are only able to access low-quality qualifications offered by private TLIs. Additionally, critics point to the proliferation of private TLIs with no local accreditation that offer these low quality degrees, as adding to the number of persons with qualifications that are unable to find appropriate jobs – leading to overeducation.

Further, there has been anecdotal evidence of corruption in the system ("Fight over GATE funds," 2012) that pays tuition to both public and private institutions in Trinidad and Tobago and the region. Critics have pointed to the lack of appropriate quality controls by the GOTT, as promoting a climate where institutions can inflate enrolment numbers, and additionally receive payments for students who are no longer enrolled at their institution. There are also rumors of government ministers and officials having direct and indirect commercial interests in private TLIs. Moreover, with an unemployment rate that has hovered between 3% and 5% in the past decade, perceptions of inequity in higher education access, overeducation and brain drain abound with little empirical evidence existing to get a full scope of the issues involved. As more countries and regions explore the possibility of providing universal free tertiary education, a thorough mapping of the Trinidad and Tobago experience will prove beneficial.

In light of the many lingering questions surrounding the implementation and future of GATE, this study will examine (1) the incidence of overeducation among graduates in a post-GATE higher education system in Trinidad and Tobago; (2) perceptions of vital stakeholders surrounding the issues of higher education quality and employment outcomes for graduates as they have been impacted by GATE; and (3) the policy decisions to be taken by GOTT for the higher education sector in Trinidad and Tobago.

Statement of Purpose

The purpose of this mixed methods study is to examine the impact of the GATE program on the employment outcomes of higher education graduates in Trinidad and Tobago. Among graduates, there has been an assumption of overeducation. This study also examines the many phases of GATE from 2004 through 2015, because it is anticipated that by understanding the intent and operationalization of the many phases of GATE, not only will clarity in purpose surface, but an examination of the influence on those GATE seeks to impact will offer a way forward in understanding, maximizing and shaping government policy on higher education finance in a developing country.

Research Questions

This study is driven by the following research questions:

1) What is the incidence of overeducation among higher education graduates benefiting from GATE in Trinidad and Tobago? What are the contributing factors of said overeducation?
2) How do graduates and other stakeholders (namely, higher education administrators, policy makers and businesspersons) make sense of the impact a system of free higher education has on the employment outcomes of higher education graduates in Trinidad and Tobago?
3) How do graduates and other stakeholders (namely, higher education administrators, policy makers and businesspersons) conceptualize the need for and efficacy of a system of free higher education in Trinidad and Tobago?

Chapter 2

Review of the Literature

In analyzing the impact government finance programs in developing countries have on students and other constituencies, and who benefits from these programs, it is beneficial to examine three themes. Firstly, I examine the literature on the returns to higher education in developing countries. Second, the concepts of cost-sharing and student loans are analyzed within the framework of international higher education finance. Finally, the literature around the employment and overeducation of graduates is reviewed in relation to developing countries, insofar as government higher education finance programs impact them.

Returns to Higher Education in Developing Countries

As developing countries strive for economic growth, it is widely accepted that investments in human capital are significant to achieve this growth. Investments in education and healthcare are viewed as among the most critical investments that can be made by a society. Becker (1993) views education and training as essential inputs in forming this human capital. In rationalizing investments in education at all levels in the developing world, there have been countless studies that examine the economic and social returns to education (Ajakaiye & Kimenyi, 2011). Estimating the rate of return to education is largely recognized as commencing with, among others, the works of Schultz (1961) and Becker (1964) on human capital theory. Becker (1964) attempted to determine the rate of return to education by positing that a person decides to choose education when weighing between the benefits and costs of that education. Mincer (1974) built on the Becker (1964) model by underscoring the importance of experience and time, and their impact on income, putting forward the argument that the earlier an investment is made, the concomitant payoffs to that investment extend further in the future. (Diagne & Diene, 2011, p. iii87).

Insofar as calculating the rates of return to education in developing countries, the work of economist George Psacharopoulos is seminal (Psacharopoulos & Patrinos, 2004; Psacharopoulos, 1973, 1981, 1985, 1994). Psacharopoulos (1981) highlighted the fact that both the private and social rates of return to primary education was highest in all regions, when compared to that accruing to secondary and higher education. He further discovered in his research that this comparatively higher rate of return to primary education was highest among countries that could be considered low income (Psacharopoulos, 1985, 1985, 1994; Psacharopoulos & Patrinos, 2004). In essence, as the level of schooling increases, the marginal rate of return to education is found to be decreasing – the diminishing returns to education.

As it relates specifically to higher education, the focus of this study, from an individual perspective, the rate of return to higher education essentially is evaluated by determining if by choosing an additional year of schooling, whether the income derived from that additional schooling would exceed the associated additional costs (Diagne & Diene, 2011, p. iii85). Despite the fact that signaling theory (Spence, 1973) postulates that additional education is often used by employers as a signal of a more productive worker, there is a paucity of literature which support the view that returns to higher education surpass those to primary and secondary education.

Additional education does not necessarily equate higher employee productivity or relative income. This realization clearly sets human capital theory against signaling theory.

The extent to which increased educational attainment impacts employee earnings is known as the “economic return of education” (Colclough, Kingdon, & Patrinos, 2010, p. 733). While not yet surpassing primary education, Psacharopoulos and Patrinos (2004) assert that the private returns to higher education have been increasing, on average outpacing that of secondary education but still lagging the returns to primary education. Psacharopoulos and Patrinos (2004) further observe that on average the rate of return of an additional year of schooling is 10% with the Latin America and the Caribbean region showing the highest average returns, when compared to other regions, based on their analysis of data from 98 countries.

Ceteris paribus, Psacharopoulos and Patrinos (2004) indicate that as the supply of education increases there has been an observed decrease in the returns to schooling, albeit miniscule. This finding is echoed by Colclough, Kingdon, and Patrinos (2010), who in surveying the literature done on the returns to schooing worldwide, discover that the returns to primary education has been falling due in part to increasing supply of primary education places and a decline in quality at the primary school level. This has resulted in lower wages and employment being available to those with just a primary school education and/or greater demand for persons who have achieved an education above that of primary schooling.

Using Colclough, Kingdon, and Patrinos’ (2010) framework of declining returns as access to a particular level of schooling becomes sufficient to interpret findings in the Caribbean, World Bank (2005), indicates that as access is limited, higher returns at that level of education are to be expected. This is reflected in the estimated returns to a University education in a sample of Caribbean countries in the World Bank's (2005) findings [see Table 2.1]. In Table 2.1, in Trinidad and Tobago for example, an employees with a secondary school education is estimated to an average wage of approximately 25% higher than a worker who only posesses a primary school education. The World Bank postulates by these returns to education contained in Table 2.1, that a shortage of workers at a specific stage of education would result in a significantly higher wage percentage being received by a worker when compared to a 'primary education holder'. Thus, St. Lucia, it will be argued has a smaller proportion of its labor force possesssing a post-secondary or university education, when compared to the other countries surveyed.

Concomitantly, Barbados' 17% higher wage differential of a worker with a secondary education will be attributed to the presence of a higher primary school participation rate in that country when compared to the other countries. It is interesting to note likewise, that the comparatively low return to university education in Barbados compared to the other countries examined is largely attributed to the full funding of university education at that time in Barbados for its citizens, thus reducing the scarcity.

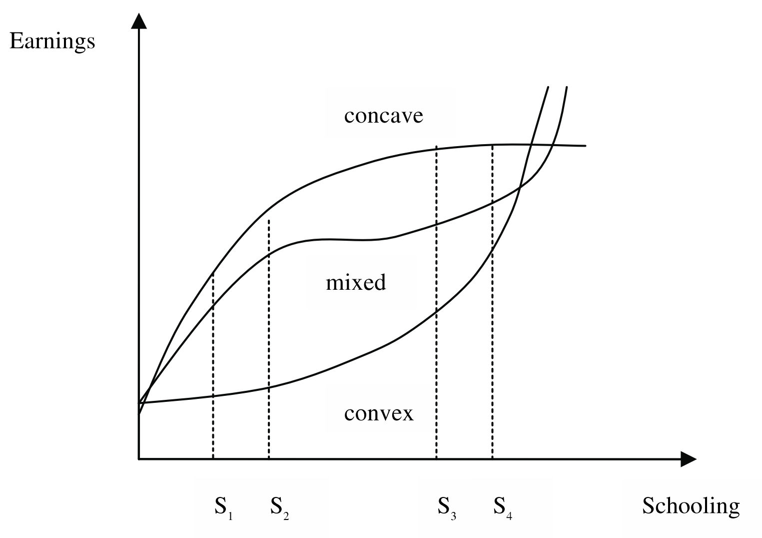
Table 2.1 Increasing Returns to Education in the Caribbean

Percentage (%) higher wage received than a *primary* education holder:	**Secondary**	**Post-secondary**	**University**
Barbados	17	35	72
Dominican Republic	72	146	210
Guyana	42	74	110
St. Lucia	34	165	223
Trinidad and Tobago	25	89	186

Source: World Bank, (2005, p.57)

As it obtains in the selection of countries highlighted by World Bank (2005) in Table 2.1 above, Teal (2011), in examining the economic returns to education in Africa, reaffirms that the return to education increases with its level, although it is not clear the returns to higher education are highest. Teal (2011) further asserts that the resulting earnings function is convex, mirroring Colclough, Kingdon, and Patrinos (2010) graphical depiction of the education-earnings relationship [see Figure 2.1], wherein a convex slope indicates that by pursuing additional levels of schooling *(S)*, earnings is positively impacted to a greater extent than if education was curtailed at the lower level of schooling.

Figure 2.1 Alternative education-earnings relationships



Source: Colclough, Kingdon, and Patrinos, (2010, p. 735)

The challenge in calculating the rates of return to education is further complicated in the developing world when one faces the challenge of the accuracy and availability of quality data and how that challenge handicaps accurate estimations of the returns to higher education. In these developing societies, at the level of personal decision-making, lack of access to quality information and the complexity of the rate of return data available for the ‘average man’, decision-making often relies on the perception of the students involved. In fact, Jensen (2010), in examining the decision making of students in the Dominican Republic, discovered that the perceived returns to education for these students were low compared to the empirical data for the country. This low perceived return to education negatively influenced the students decision to stay in school past the eighth grade. However, when provided with understandable data as to the monetary value of attending school beyond the eighth grade, students on average were more likely to complete additional school years than those who were not exposed to that information.

Diagne and Diene (2011) identify there being two classifications of the returns to higher education: private returns and social returns. The private returns of higher education are determined to be an analysis of the costs and benefits associated to higher education for individual students. These private benefits are identified as being both monetary and non-monetary. Whereas, the social returns to higher education are influenced by an analysis of the costs and benefits that accrue to the society as a whole, as a result of higher education (Diagne & Diene, 2011). In quoting the European Commission (2007), Diagne and Dienne delineate a "general classification of the benefits of higher education" (2011) [see Table 2.2].

Table 2.2 General Classification of the Benefits of Higher Education

Benefits	**Private**	**Social**
Monetary	Employability High Income	Higher productivity Higher net income Less dependence on the state Labour market flexibility Less employment
Non-monetary	Improved efficiency for consumers Less spread of diseases Low fertility Quality of children Improved health	Reduction in criminality Improved social cohesion

Source: Diagne and Dienne, (2011, p.iii82)

The private and social benefits of higher education as highlighted in Table 2.2 have proven to be attractive in drawing additional 'participants' to the higher education sector, particularly in the developing world. Barro & Lee's (2013) dataset on educational attainment in 146 countries over the period 1950 to 2010, shows that concomitant with increases in the average years of schooling, one observes consistent increases in the completion rates of tertiary education. Specifically, in Latin America and the Caribbean the completion rate for tertiary education in 2010 was estimated at 6.8 percent compared to a completion rate of 0.6 percent in 1950 (Barro & Lee, 2013, p. 187).

The benefits of utilizing rates of return to education to justify what investments are made to different levels of schooling does not however go unchallenged in the literature (Bennell, 1996, 1998; Merrett, 1966). The premise of rates of return to education as highlighted above is that primary education has a higher rate of return than secondary education, which in turn has a higher rate of return than higher education. Further, it is put forward that private rates of return outweigh social rates of return. As early as 1966, Stephen Merrett was arguing that there should be a discontinuation of research into the rate of return to education, based on the premise that there was an unsubstantiated linkage being made between a person’s income and his productivity (Merrett, 1966).

While recognizing that rates of return to education have some function in education policy in developing countries, the concept of rates of return to education has been criticized on many fronts. Bray (2002), points out that among these criticisms is the fact that higher earnings at the higher levels of education are driven by the fact that higher levels of schooling act as screening agents wherein only the privileged or talented gain access, and thus higher earnings. Further, the portrayal of precision in rates of return analysis and future prediction using said data, can be misleading especially since the data used is significantly outdated (Bray, 2002).

Bennell (1998) directly challenged the work of George Psacharopoulos in calculating regional rates of return to education, upon which major investment decisions have been based. Using the case of calculations by Psacharopoulos for Asia, Bennell (1998) posited that the use of insufficient data for all the inputs other than education which impact a person's income, significantly handicaps the reliability of Psacharopoulos' calculations on a country level and compounds the problem at a regional level. Additionally, a significant shortcoming of relying on rates of return to education to inform education policy, is the fact that it does not take into account the non-monetary benefits of education, and treats education solely as an economic good.

Massification of Higher Education in Developing Countries

As participation in higher education increases throughout the world and particularly in developing countries, specifically in post-colonial systems, these systems are moving away from being elite systems towards being mass systems. This rapid increase in higher education participation has been referred to as 'massification' (Altbach, 1982). Trow (1973; 2010) describes elite higher education systems as existing in countries where up to 15 percent of the relevant cohort gain access to these institutions. Until societies provide access to up to 50 percent of its age cohort to higher education, Trow (1973; 2010) refers to this as experiencing mass access, with above 50 percent being considered to be universal access. As one moves from elite, to mass, to universal systems of education, with increasing access to more and more higher education students, there are myriad impacts of these changes to the complexion of the system in existence, as displayed in Table 2.3. As higher education transitions to being universal, according to Trow (1973; 2010), it is seen less as a privilege. The system then is expected to reflect the diversity of the society, and is the means by which the society prepares for technological advancement.

Table 2.3 Aspects of Transition in Higher Education

System Size	*Elite*	*Mass*	*Universal*
Age cohort with access	Up to 15%	Up to 50%	Above 50%
Attitude to Access	Seen as a privilege (of birth or talent)	Seen as a right (for those with formal qualifications)	Seen as an obligation (for children of the middle and upper middle classes)
Functions of higher education	Shaping mind and character of the ruling class; prepares students for roles in government and the professions	Still shaping elites, range broadened to include preparation for technical and economic organizations. Shift from shaping character to transmission of skills	Preparation for life in advanced industrial society; training for entire society to adapt to social and technological change
Institutional characteristics	Highly homogeneous (institutions look alike); high and common standards	More 'comprehensive'; more diverse standards; mobility of students and staff in the system	Great diversity in institutions; no common standards
Size	"Communities" of 2,000-3,000 students in residence; if larger broken into smaller units/colleges	'Cities of intellect' up to 30,000-40,000 students and staff; mixed residential/commuting population	Unlimited in size; aggregates of students enrolled for 'instruction'
Academic Standards	Standards broadly shared and high	Variable standards differing in severity and character	Different criterion of achievement; not solely focused on achievement of academic standard

Access and selection	Ascribed status dependent on secondary school performance and performance/grades on special exams	Meritocratic criteria where access is limited; introduction of non-academic criteria to reduce "inequities" in admission for disadvantaged groups/categories	Choice top associate with institution; aim to reflect population
Student "career"	Student enters immediately after secondary school; students live on campus and pursue education uninterrupted	Student enters immediately after secondary school; increasing numbers delay after period of work or travel; mixed residential/commuting population; vocational training becomes a component	Postponement of entry; large number of students with work experience/adults; lifelong learning
Forms of academic administration	Governed by part-time academics; amateurs at administration; some full-time civil servant to deal with financial and administrative matters	Larger staff; top leadership of men (former academics); large and growing bureaucratic staff	More sophisticated forms of program management; full-time professionals; management procedures data-driven

Source: Trow, (1973; 2010)

Altbach (2013) identifies massification as "the most ubiquitous global influence of the past half century or more" (p.4). He further outlines massification as spreading from the United States (1920s), to Europe (1960s), to parts of Asia (1970s) and in the twenty first century to many developing countries (Altbach, 2013). Tewarie (2011) in addressing the need for sustainable financing mechanisms in small states, identifies the sources pushing massification trends in small states as being the increased social demands for higher education and the desire of small states to participate in the global knowledge economy. He additionally highlights the fact that growth in enrollment in small states have outpaced that being experienced globally.

The World Bank and its Role in Dictating Education Investment Decisions

In light of the fact that contemporary massification trends in higher education are primarily centered in the developing world - mostly in formerly colonial societies, this movement towards mass higher education tends to mirror the evolving viewpoint of the World Bank on investment in higher education. For these developing countries, in large part, their affinity to expanding higher education access is closely aligned to the international 'best practice' - often as dictated by the World Bank and other multilateral lending agencies.

In charting the trajectory of the Bank's educational involvement, Heyneman (2003) pointed out that the original Post-World War II mandate of the World Bank was to provide infrastructure to support trade and commerce. It was not until the 1960s that the Bank saw education as being critical through its reliance on manpower forecasting – the beginning of an emphasis on human capital theory. Manpower forecasting however was linked primarily to the provision of engineers to solve stubborn infrastructural issues (Heyneman, 2003).

Beginning in the 1970s with the growing influence of economists like George Psacharopoulos at the Bank and the emergence of rates of return to education as an economic model used to justify what level of education was invested in, the Bank's policy directive stressed the funding of basic education with emphasis on primary education. This was as a result of what was then cutting edge research, showing evidence of significant returns to primary education (Psacharopoulos, 1973, 1981, 1985). With economic turmoil in the developing world and the central role the Bank was playing as an economic lifeline, it's structural adjustment policies allowed it to dictate policy, and thus, the Bank's reliance on the rate of return methodology ensured that its funds were applied largely to support primary education.

By the mid-1990s, the Bank would pivot on the importance of financing higher education, framing its newfound support of the higher education sector around what it termed to be a "crisis throughout the world" (World Bank, 1994, p. 1). The Bank took no blame for the fact that 'the crisis' existed largely in the developing world where the Bank's policies for decades discouraged any public subsidies to higher education, effectively leading to the neglect and, in most cases, the collapse of this sector (Robertson, 2009; Salmi, Hopper, & Malee, 2009). Its reliance on rates of return to education had significant implications for education policy. It was the Bank's view that scarce public resources should be directed to primary education, away from higher education. And further, with the private rate of return to education being higher than the social rate of return to education, public subsidy should be reduced and individuals should contribute to their further education through the imposition of fees.

It was only in 1994, recognizing the 'crisis' that the higher education sector was experiencing in many low income countries, that the World Bank endorsed a new trajectory of supporting involvement in higher education (World Bank, 1994). This came after the many decades where the structural adjustment policies of the World Bank handicapped any meaningful investment in higher education (Robertson, 2009; Samoff & Carrol, 2004).

Through the publication of *Higher Education: The Lessons of Experience*, the World Bank made a forceful entrance into the debate on the integral role of higher education in developing countries (World Bank, 1994). *Higher Education: The Lessons of Experience*, was the Bank's first policy statement on higher education, and framed the Bank's approach to higher education still within its core objective of poverty reduction. The Bank began to formally recognize that higher education plays a significant role in boosting economic growth, through its impact on improving worker productivity, and the benefits to be derived in the long run from research and technology adoption. The Bank, however made these acknowledgements in the face of maintaining that higher education has a lower rate of return when compared to primary and secondary education. Primary and secondary education were still deemed as having a greater impact than higher education at reducing high levels of poverty.

The Bank's involvement in higher education at that time was still thus overshadowed by its view that primary and secondary education should receive its full attention. The Bank saw its role in higher education as facilitating equitable and cost-effective financing, thus enabling primary and secondary schooling to receive greatest consideration by developing countries through their allocation of limited public resources. Expansion in higher education was thus viewed by the Bank as being a function of private higher education. Consequently, the largely prescriptive approach taken by the World Bank (1994) was to recommend that countries should focus on developing the private higher education sector, align government funding to student performance and promote the diversification of funding schemes, that did not rule out students shouldering the costs of their higher education. It was recommended that the higher education sector was better served with governments focusing on quality, responsiveness and equity – areas of higher education that were more policy oriented than they were burdensome financially.

While before 1994, the Bank was making investments in higher education, primarily in Latin America and Africa, *Higher Education: The Lessons of Experience*, brought higher education into the mainstream of World Bank discussion. Its focus on equity and the promotion of private higher education, to a large extent countered the realization that developing countries were utilizing a disproportionate slice of their education budgets to support higher education systems that benefited the privileged - who were in no need for publicly subsidized higher education (S.P. Heyneman, 2003).

Austerity and the role of governments

As the World Bank was changing its position on higher education support and finance, developing countries were firmly within the pangs of years of economic difficulties and their economies were experiencing declining or, at best, flat-lining economic growth. In addition to the Bank's provision of funds to support the higher education sector, the Bank was also supporting countries in directing increased funding to higher education as demand increased in these countries, that at the same time were experiencing significant population growth and low participation in the higher education sector (Johnstone, 2002).

As the levels of schooling increase, the costs to governments of providing education at those higher levels also increase, even as relative participation rates decrease. Public subsidies at higher levels of schooling thus support smaller proportions of a developing country's population. In most cases, in the developing world, higher education is largely the domain of the elite. Due in large part to cost considerations, public subsidies increase as a developing country's attendance capacity at higher levels of education increases (Psacharopoulos & Patrinos, 2004, p. 112). In times where governments are limited in the amount of taxation that is possible to increase government revenues, and the competing interests of healthcare and infrastructure development for example, financial austerity in the higher education sector in the developing world is increasingly demanded (Johnstone, 2002).

While increasingly mass access to higher education has been the trend, there has not however been the concomitant increase in financial resources to support higher education (Fox, 2002, p. 129). As democracy spreads and citizens demand accountability from public officials, in light of the scarce resources available to governments in the developing world, despite clamoring for increased access to higher education, individuals are not always prone to support the increased allocation of public funds to the higher education sector. In small open economies, Viaene and Zilcha (2013) observe that individuals see allocation of government resources to higher education as a means of taxing the poor to the benefit of the rich, since most of the poor have little access to higher education traditionally.

Haupt (2012), in his analysis on the support for public spending on higher education in a democracy, however, does not support the sweeping assertions of Viaene and Zilcha (2013). Haupt (2012) opines that the evolution of education policy, especially as it relates to higher education finance, mirrors not only social stratification in the democratic society but also the expanding demographic of skilled parents over time – as the children of skilled parents comparably utilize higher education at greater rates. In problematizing the use of public resources in providing higher education, Haupt (2012) demonstrates that an increase in the number of skilled parents in democracies is often the force behind the clamoring for increased public spending in higher education. Paradoxically, Haupt (2012) points out that in the long term, when demand for higher education explodes and these costs become fiscally unsustainable, this same sector of parents are often the ones behind calls to reduce public support.

International Higher Education Finance – revenue diversification

Irrespective of which side of the fence that a citizen in the developing world sits on the role of and extent to which their government should be involved in the financing of higher education, with finite public resources and concomitant limited capacity in the public higher education sector, there is need for ‘revenue diversification’ (Johnstone, 2002). This revenue diversification as propagated by Johnstone (2002) promotes efficiency in the system while at the same time creating the environment to address the demand in the sector.

Cost-sharing and the implementation of student loan programs, as addressed below, have been the more popular measures implemented in developing countries in the face of financial austerity (Johnstone, Teixeira, Rosa, & Vossensteyn, 2006). They however are not the only forms of revenue diversification available to governments. In addressing the need for sustainable systems of higher education in Africa, Oketch (2003) identifies four elements that impact the cost and financing of these systems, namely, demographic factors; the economic health of the country being examined; the impact of foreign funding (whether through aid or debt) and the higher education climate.

Cost-sharing

Elite higher education systems, in the developing world especially, have a heavy reliance on government financing and centralization (Trow, 1973, 2010). As higher education systems in these countries move towards mass access to higher education and there are competing demands for the public purse, there is a greater need for revenue diversification to offset the public costs of higher education. It should be noted, however, that higher education systems even while trending towards providing mass access, still in their structures, reflect their elite origin (Trow, 2000, p. 6). Thus, a tension persists between which aspects of the previous system should be maintained. In quoting Lemelin (1998), Diagne and Dienne (2011) delineate a "general classification of the costs of higher education" (2011, p. iii82) [see Table 2.4].

Table 2.4 General Classifications of the Costs of Higher Education

Agent	**The community (social)**	**The student (private)**	**The government (public)**
Costs	Direct costs: total value of expenditures on education: income paid to teachers, maintenance fees and capital costs Indirect costs: total value of goods and services that are not produced (approximately by the total value of income not earned	Direct costs: total value of tuition fees and additional fees Indirect costs: Unearned income (net of taxes) during education (opportunity cost) minus financial aid	Direct costs: subsidy to student and learning establishments Indirect costs: value of taxes not collected on income lost during training

Source: Lemelin, (1998)

Irrespective of whether a system of higher education is considered to be 'free', there are costs associated with that system that must be borne by someone. In examining the Greek system of 'free' higher education, Psacharopoulos and Papakonstantinou (Psacharopoulos & Papakonstantinou, 2005), discover that more is spent by families prior to and during university study than the per student cost borne by the state to provide that 'free' tertiary education. The costs of obtaining a higher education are shared by primarily four primary constituencies:

students, parents/families, government/taxpayers and donors (private and international) (Johnstone, 2002; Johnstone & Marcucci, 2010).

Cost-sharing (Johnstone, 1986) refers to a shifting of the costs of higher education from governments, to students and their families. Cost-sharing thus refers to the fact that the costs of higher education are shared among governments, students, parents, and donors; as well as an examination of a change in public policy that reduces the dependence on government finance and shifts this burden to a mix of students, parents and some public support (Johnstone & Marcucci, 2007, p. 16). Cost-sharing is primarily connected with tuition fees and the ancillary fees associated with tertiary education attendance such as food and board (Johnstone & Marcucci, 2007, 2010).

Tuition fees, meant to cover some of the costs of providing higher education, are being initiated and/or increased in most countries. To counterbalance the increased demand for higher education and the decreased contributions from governments and taxpayers through subsidies and direct transfers, tuition fees are indispensable (Marcucci & Johnstone, 2007). The ability to impose and, in most cases, increase tuition fees, often lies with the central government in cases where higher education is achieved through public institutions and higher education administration is centralized, as in Hong Kong and Austria, for example. In other scenarios where there is increased competition between public and private institutions, usually in cases of mass systems of higher education, the ability to institute and increase tuition fees rests with the individual institutions often in consultation with the central or local government (as exists in Chile, Taiwan, Indonesia, and other similar countries) (Johnstone & Marcucci, 2010).

Tuition fees differ in how they are implemented in different systems of higher education. (Marcucci & Johnstone, 2007) have opined that determination of the type of tuition fee policy implemented is inherently driven by how the society views parental and personal responsibility for bearing the costs of higher education. Upfront tuition fees are instituted where payment is expected at matriculation, and often reflect societies that deem parents have a responsibility to contribute in some way to bearing the cost of higher education for their children or some fraction of those costs, as they are financially capable to do so. Countries that institute no tuition fees or deferred student fees, on the other hand, see students as bearing the costs of their education, with parents bearing no responsibility – students are viewed as incapable of bearing such costs while they are studying (Johnstone & Marcucci, 2010; Marcucci & Johnstone, 2007).

Additionally, in countries where free education is deeply engrained either legislatively or politically in the society, but where there are limits on how many students the state can support, where tuition fees are expected, a system of dual track tuition fees is implemented. On one track some students pay no tuition fees, and on the other track students who do not gain access to the institutions via full funding, usually because they do not achieve the academic pre qualifications for admission, are required to pay tuition fees (Johnstone & Marcucci, 2010; Marcucci & Johnstone, 2007). The distribution of these various types of tuition fee policies globally is highlighted in Table 2.5 below.

Technical and pragmatic opposition to cost-sharing identify the fact that by introducing cost-sharing, a level of administrative and technical capability is required, which most developing countries are incapable of adequately implementing. For these objectors, the point is made that the poor and other minority groups would be further marginalized if cost-sharing

Table 2.5 Forms of Public Tuition Fee Policies

Up-front tuition fees		**Deferred tuition fees**	**No or only nominal tuition fees**		**Dual track tuition fees**	
Austria	Korea	Australia	Argentina	Iceland	Angola	Lithuania
Belgium	Liberia	England	Benin	Ireland	Australia	Madagascar
Botswana	Lichtenstein	Ethiopia	Bolivia	Lebanon	Bulgaria	Malawi
Bulgaria	Luxembourg	Lesotho	Brazil	Mali	Cambodia	Mauritius
Burkina Faso	Malaysia	Namibia	Burundi	Malta	Czech Rep.	Poland
Canada	Mongolia	New Zealand	Cameroon	Mauritania	Egypt	Romania
Chile	Mozambique	Rwanda	Cape Verde	Mexico	Estonia	Russia
China	Netherlands	Swaziland	CAR	Morocco	Ethiopia	Rwanda
Colombia	Nigeria (S)[2]	Tanzania	Chad	Niger	Ghana	Senegal
Costa Rica	Philippines	Wales	Congo-Brazza.	Nigeria (F)[6]	Hungary	Tanzania
Cote d'Ivoire	Portugal		Congo-Dem.	Norway	Jordan	Uganda
Ecuador	Serbia		Cuba	Paraguay	Kazakhstan	Zambia
Gambia	Sierra Leone		Cyprus	Peru	Kenya	Zimbabwe
Germany[1]	Singapore		Denmark	Saudi Arabia	Latvia	
Hong Kong	South Africa		Eritrea	Scotland[7]		
India	Spain		Finland	Slovakia		
Indonesia	Switzerland		France[3]	Slovenia		
Italy	Taiwan		Gabon	Sudan		
Japan	Turkey		Germany[4]	Sweden		
Jordan	United States		Ghana	Syria		
Kenya	Vietnam		Greece	Togo		
			Guatemala	Tunisia		
			Guinea	UAE		
			Honduras	Uruguay		

Source: Johnstone & Marcucci, (2010, p. 108)

1. Seven Länder now have tuition fees in their universities.
2. State universities in Nigeria.
3. As of 2009, French universities have no tuition fees as such (as the 1958 Constitution requires), but they charge registration fees of €230 [US$251].
4. Nine Länder have retained free tuition.
5. While Ireland's universities do not charge tuition fees, they do charge a yearly student service fee of €750 [US$735].
6. Federal universities in Nigeria.
7. Scotland changed from up-front to deferred tuition fees in 1999 but abandoned them in 2008 for new entering students

policies are implemented. From a political and strategic perspective, opposition emanates from the perspective that implementing cost-sharing measures will not in any way result in a reassignment of tax revenue previously allocated to higher education to other important public functions such as healthcare, but together with the new cost-sharing measures will be lost to corruption (Johnstone & Marcucci, 2010; Marcucci & Johnstone, 2007).

Cost-sharing, primarily through the implementation of tuition fee policies, requires some level of financial contribution from the recipients of higher education. These expenses in most cases are met through borrowing. Student loans become a source of external funds that supplement government funding and subsidization of higher education. These loans thus provide for the expansion and support needed as systems cater to more students and a wider spread of programs due to massification, and as countries pursue the benefits that accrue from increased access to higher education (Albrecht & Ziderman, 1991). Student loans supplement funding from parents and taxpayers – funding, which if not present, would otherwise be non-existent (Johnstone & Marcucci, 2010). Particularly in the developing world, the need for revenue to facilitate the expansion of higher education will increase at a faster rate than the possible increases in tax revenue that can be assigned to support the system of higher education (Johnstone, 2013) – underlining the need for student loans as a means of financing higher education in these countries.

The objectives of student loan programs [Table 2.6] greatly impact the sustainability of these programs and significantly impact how these programs are structured and operate. These objectives, like the very need for the program, vary across countries and systems (Ziderman, 2002). Loans can be funded either publicly or privately usually with some measure of public subsidy/oversight.

Table 2.6 Alternative Objectives of Student Loan Schemes

Objective 1: Budgetary objectives (income generation) • Income generation to maintain university enrolment levels and output/quality, in response to rising public university unit costs (additional government funding not available) • Funding replacement: in response to reduction in overall government expenditures, including the education sector • Funding replacement: in response to reallocation of public education budgets, from universities to sub-sectors with higher societal rates of return (e.g. basic education)
Objective 2: University system expansion • Generation of additional revenues to (partially) finance expansion of the public university sector • University expansion through growth of the private university sector (to minimize the state's role in financing expansion)
Objective 3: Social objectives (equity/access for the poor) • Loans targeted on needy students • Cross-subsidization: grants for needy students financed by income from higher fees
Objective 4: Manpower needs • Meeting specific occupational/regional manpower needs
Objective 5: Student Assistance • Easing student financial difficulties during study • Increasing student commitment • Financial independence for students

Source: Ziderman, (2002, p. 39)

While on its face, student loans seem an attractive option to provide much needed financial support for the higher education system and as a means to provide funding for students who would otherwise be out-priced from gaining access to a higher education, the impact of student loans is marginal at best according to Albrecht and Ziderman (1991). Johnstone (2013) referring to student loan programs, goes so far as to argue that with the complexity of operating efficient student loan programs, it may indeed be better that governments award grants and in the process save money which is often lost to poorly designed student loan schemes.

Student loan programs, particularly in the developing world, face significant challenges both in their implementation and also in their operationalization. Primary among the challenges faced by student loan schemes is the fact that they are costly initiatives to operate (Albrecht & Ziderman, 1991). In most cases, these programs require a complicated bureaucracy to administer funds, and loan recovery to minimize loan default is usually expensive. Another challenge faced by student loan programs in the developing world is the fact that in most cases government subsidies are too high, defeating the purpose of implementing a student loan program, since subsidization still requires expenditure of public resources. This creates artificially low interest rates – a problem which must be addressed if a student loan program is to be successful (Johnstone, 2006, 2013). The issue of corruption in developing countries also poses a problem to the effective operation of student loan schemes (Stephen P. Heyneman, 2004; Johnstone, 2004; Olken & Pande, 2011). In most of these countries, there is an over-reliance on the government to implement student loan programs, where bureaucratic inefficiencies often provide opportunities for corruption to flourish.

In addressing the major challenges of student loan schemes in developing countries, as identified above, Johnstone (2013) describes what he terms "the three legs of the stool of successful loan schemes". These 'three legs' are described as:

> 1.Design: building in minimal interest subsidization and real theoretical recovery.
> 2.Execution: minimizing non-repayments / defaults.
> 3.Tapping private capital: lessening the annual demands on Governments operating budget and treating students loans as real assets rather than as expenditures.
> (Johnstone, 2013, p. 17)

Within the framework of massification, as developing countries implement higher education finance programs to support the expansion and sustainability of the financing decisions that are enacted, one expects that these decisions will be made with all expectation that they will redound to the benefit of the entire society. In problematizing the role of the state in higher education finance, the policy decisions taken with respect to government finance programs thus should be filtered through the strands of equity, access, quality and the employment of graduates.

Equity and Access in Higher Education

In examining the impact of government higher education finance programs on equity, the system of higher education that is established is seen as being equitable when students are represented at this level of schooling irrespective of their socio-economic status (SES), sex, or geographic location within the country under examination. In moving towards a cost-sharing model, the historical lag experienced wherein attributes of the previously existing elite system of higher education commonplace in many developing countries, proves to be a significant impediment to achieving some modicum of widespread equity in the system.

This elite system as it existed, while largely providing ‘free’ higher education which in theory was available to all members of the society, disproportionately resulted in the middle and upper classes enjoying the benefits of this free education, with the costs effectively being borne on the ‘backs’ of the working class through taxation. Marcucci and Johnstone (2007) describes this occurrence as “a redistribution of income from the poor to the wealthy” (Marcucci & Johnstone, 2007, p. 27).

Government finance programs insofar as they overcome this 'historical lag' and provide a method of means testing that makes provisions for those with true financial needs, would promote equity in higher education. Kwiek (2008) in examining higher education in the formerly Russian territories in Europe, have found that the social and institutional structures of higher education in these territories that have been developed over long period of time, have proven resistant to change even as finance policies have changed. The same could be observed in regions such as Africa and the Caribbean wherein systems of higher education still struggle with the challenges wrought by their colonial legacies, despite attempts at modernization.

There must be a balance between the revenue side of the higher education finance equation which seeks to efficiently address the costs of providing higher education and the need to promote access (Johnstone, 2009, 2013). Student loan programs when administered efficiently and loan recovery is successful, have proven to be a fillip to increase access. For example, Nyahende (2013), observes that the successful implementation of the student loan scheme administered by the Higher Education Students' Loans Board (HESLB) in Tanzania, has resulted in the increased participation of students in higher education institutions, irrespective of their political allegiances or economic situation.

Ziderman (2005), in examining the role student loans play in increasing accessibility to higher education have made some significant observations. Insofar as student loan programs are introduced within the framework of cost-sharing, in terms of increasing access to the poor, he highlights the inconclusivity of the evidence. In Australia, the evidence suggests that the student loan program there was successful in providing access to the poor, whereas his analysis of UK loan schemes geared towards addressing cost-sharing negatively impacted access through its imposition of hardship on the affected students. This points significantly to the importance of the design of the student loan scheme in determining the success of that program.

The importance of the student loan program design and operationalization is further highlighted in Ziderman's (2005) examination of Asian loan schemes directed specifically at the poor. Ziderman (2005) asserts that loan schemes are bound to fail in their goal of improving access to the poor and other marginalized groups unless five key settings are implemented. In targeting the poor, it is important that there be effective eligibility and screening criteria; pro-active targeting; national impact that targets all areas of the country; adequacy of the loan size to meet the needs of the students being targeted, and finally, unifying grants and loans policy that emphasizes the provision of a financing package weighted in favor of grants for needy students. He is quick to point out however, that these conditions are often overlooked.

Understanding that a crucial pre-requisite for admission to higher education is the successful completion of the lower levels of schooling –primary and secondary, (Yang & McCall, 2014) show that irrespective of a country's level of development, public spending on lower levels of education as a percentage of GDP has a positive and statistically significant effect on tertiary enrollment ratios for all countries. Highlighting the importance of the lower levels of education in promoting increased access to higher education leads to the circuitous revelation that providing a high quality primary and secondary education for all students depends largely on the ability of higher education systems to produce well-trained teachers for these levels (Ajakaiye & Kimenyi, 2011).

Quality of Higher Education in Developing Countries

In addressing the quality of higher education in developing countries, there seems to exist an inverse relationship between on the one hand demanding quality, and on the other hand requesting increased access through the expansion of the system. The widespread assumption has been that by merely allocating additional financial resources to higher education, quality will improve. This approach has proven to be ineffectual (Hanushek, 2013). Hanushek further prescribes that providing both infrastructure and access are essential ingredients to improving quality, and thus, being deliberate in setting a measured timetable to increasing the number and size of higher education institutions, lends itself to the development of quality schools (Hanushek, 2013).

Some filtering in admissions policy is required to achieve quality higher education. Finance strategies that promote unfettered access, do little to promote quality programs and institutions. Providing free tertiary education irrespective of student preparation for higher education - through the effective preparation at the secondary level of schooling and considering the physical capacity of the tertiary education infrastructure, significantly impacts the quality of education offered (Johnstone, Arora, & Experton, 1998; World Bank, 1994).

Further, achieving substantial quality is dependent on successful resource allocation. One of the major planks on which cost-sharing stands is that it offers the opportunity to increase the financial resources available to institutions in the higher education system, away from a reliance on the often problematic access to government allocations. The extent to which this new financial injection as evinced by a reformation in the financing strategies being implemented, can result in the strategic targeting of these monetary injections into the spheres of recruiting quality faculty, investment in modern research, technological and academic infrastructure, and in curricula suitable to the needs of the society, the quality of the higher education system will be impacted (Johnstone et al., 1998).

Overeducation and its Impact on Employment

At the individual level, Colclough et al. (2010), point out that education is valued for its function in increasing the productivity of its beneficiaries, providing relatively better remuneration and as a means to escape poverty. It is the expectation among individuals that the more education they attain, the more money they will make and all of this will redound to the society's benefit. In developing countries, one of the fundamental issues affecting economic growth is the productivity of the labor force (Farrell, 2012). Higher education is pivotal in increasing productivity (Kimenyi, 2011). Barro and Lee (2013) also establish the existence of a positive relationship between a well-educated population and a high level of labor productivity. This is primarily observed in the ability of a highly skilled workforce being capable of absorbing and replicating technological advances which are the backbone of developed societies.

Within the framework of higher education massification in the developing world, of concern is the fact that the supply of tertiary educated graduates may outstrip the demand for these graduates, leading to workers accepting positions for which tertiary level qualifications are not necessary. As educational attainment continues to rise, as is the case today (Barro & Lee, 2013), supported by the financing policies being implemented by governments to promote the expansion of tertiary education access and there not being a concomitant increase in employment growth at those levels, the existence of overeducation seems inevitable (Budría, 2011; Tsang & Levin, 1985). Employees whose educational level exceeds that required to perform their jobs are not as contented and less productive in those jobs (Tsang, Rumberger, & Levin, 1991). Overeducation poses a major problem for national systems of higher education that are unable to match the expansion in access to higher education to the creation of jobs that would fully utilize workers' skills to absorb those graduates.

In the literature there is no singular definition of overeducation, Rumberger (1981) however identifies overeducation as occurring in three instances: (1) a reduction in the fiscal returns to education at a specific level, particularly represented by earnings, when compared to previous fiscal returns at that same level at past times; (2) the job one expects as a result of a certain level of education is not realized; and (3) a mismatch between the level of education of an employee and the educational prerequisite of their job. For the purposes of this study, overeducation is defined as a higher education graduate being employed in a job which requires no higher education qualifications or qualifications at a lower level.

Like in settling on a singular definition for overeducation, there are multiple approaches to gauging the existence of overeducation. Summarizing Dolton and Vignoles (2000) and Rumberger (1987), Rubb (2003, p. 624) identified four such methods delineated in the Table 2.7 below. The Job Analysis; Average Education and Modal Education approaches to identifying overeducation all rely on the availability of statistical data on the population being examined.

Table 2.7 Approaches to identification of overeducation

METHOD	DESCRIPTION
JOB ANALYSIS	Estimates the level of required education for a specific job based on an external (usually governmental) source
SELF REPORT	Estimates the level of required education by asking workers directly about the minimum education requirements necessary to perform their job
AVERAGE EDUCATION	Estimates the level of required education by computing the mean of educational attainment within an occupational category
MODAL EDUCATION	Estimates the level of required education by computing the amount of education that most commonly occurs within an occupational category

Source: Rubb (2003)

Specifically, the self report method (Rubb, 2003), also referred to as the "self-assessment method" (Dolton & Vignoles, 2000), relies on the direct questioning of respondents as to their perception of whether their educational attainment/qualification exceeds the skills required to perform their current job (Alba-Ramirez & Blazquez, 2002). In addition to Alba-Ramirez and Blazquez (2002), the use of the self-assessment method is used in several studies to categorize respondents as overeducated (Duncan & Hoffman, 1981; Sicherman, 1991).

Sicherman (1991) identifies several characteristics of the overeducated worker. In the first instance, the overeducated worker is paid more on average than their co-workers, but lower wages than workers employed in jobs with the same level of schooling as the overeducated worker which meets the requirement of the job. Secondly, “overeducated workers are less experienced and report lower amounts of training” (p.114). Further, Sicherman (1991) discovered that the overeducated worker is more likely to change jobs, often moving to a “higher-level occupation” (p.114). Overeducation is largely temporary and seen as a point in the worker’s career growth trajectory.

While in the literature it is undisputed that overeducation results in worker disillusionment and reduced productivity (Tsang et al., 1991), multiple studies have discovered that individuals may still pursue additional education beyond the requirements of their job as the return to surplus education is positive (Dolton & Vignoles, 2000) and highly significant (Duncan & Hoffman, 1981).

Gaps in the Literature

In reviewing the literature surrounding the impact of government finance programs in developing countries in the current climate of massification and austerity, the existing literature can best be defined as overwhelmingly descriptive of existing systems and prescriptive as to which methods of finance best achieve the elusive economic growth most developing countries are chasing. Further, there currently exists a lack of empirical studies of overeducation in countries of the Caribbean. The literature review reveals a significant gap which needs to be filled – little attention has been paid to giving voice to the experiences and indeed, the realities, of the students, administrators, legislators and business community, in whose name the higher education reforms have been implemented. This study aims to give these voices sufficient space to highlight how they are impacted.

Theoretical Framework

In analyzing higher education finance policy in a developing country, especially one with a colonial past, it is important that one examines policies not just as systems put in place to bring about some form of social change, but that the concept of agency in relation to the actors at play is recognized. Historically, policies were treated as actions that were imposed on a society in a unidirectional way by the State. Stephen J. Ball (1994), however would describe policy as "both text and action, words and deeds, it is what is enacted as well as what is intended" (p. 10).

This problematizing of policy by Ball (1994) was seen as post-structuralist/post-modernist shift of educational policy from a "macro-level" with a focus on government's role in enacting policy, to a "micro-level", where policy is viewed as being in the domain of individual units such as the classroom and the schoolhouse (Vidovich, 2007). This conceptualization of policy, without doubt, then forces the analyst to examine the power dynamics that are at play in the implementation of policies. A critical theorist analysis would see power in relation to policies being wielded 'from on high' by the hegemonic powers in a society – the government and the elite/ruling class. Whereas a Foucauldian approach sees power as "not unitary and centralized but it takes decentralized, plural forms as it disperses throughout institutions and processes" (Vidovich, 2007, p. 286).

The role of the State in the formulation and implementation of education policy is the distinguishing feature that sets apart the two camps. The centrality of the State (Dale, 1989), on one hand, and the existence of a 'policy cycle' that is in constant motion (Bowe, Ball, & Gold, 1992), wherein policy is being constantly remade as it passes through the cycle of influence, text production and practice. This conceptualization of the State as being central is of significance in post-colonial contexts like Trinidad and Tobago, wherein the State is the economy and the economy is the State (Best & Levitt, 2009).

Critical policy analysis thus proves to be an adequate framework within which to approach an examination of education policy that seeks to ‘give voice’ to all the constituents of the education ‘policy cycle’. Within this framework, policy, so often relegated to being a mere document, is viewed discursively as text and texts are subject to multiplicity of meanings (Taylor, 1997). Taylor (1997) asserts that “associated with this theoretical approach is some sort of textual analysis, ideology critique or deconstruction to highlight the constitutive practices texts use. The approach is useful in highlighting values and teasing out competing discourses, both in policy development and policy implementation” (p. 27).

Insofar as critical policy analysis problematizes the multiple conceptualizations of social issues and the concomitant policies that attempt to remedy these problems, by “seek[ing] to facilitate interpretations and critiques by the people who will be affected” (Chalip, 1996, p. 313). Whereas social policies in postcolonial societies perpetuate and ‘cement’ in place the status quo, a paradigm is required wherein the status quo can be challenged and social change effected especially for those members of society for whom policies can have a revolutionary impact.

Chapter 3

Methodology

In seeking to understand the governmental policy of providing free tertiary education to the citizens of a developing country, this study addresses the following research questions:

a. What is the incidence of overeducation among higher education graduates benefiting from GATE in Trinidad and Tobago?

b. How do graduates and other stakeholders (namely, higher education administrators, policy makers and businesspersons) make sense of the impact a system of free higher education has on the employment outcomes of higher education graduates in Trinidad and Tobago?

c. How do graduates and other stakeholders (namely, higher education administrators, policy makers and businesspersons) conceptualize the need for and efficacy of a system of free higher education in Trinidad and Tobago?

This chapter delineates the research methodology of the study, particularly by outlining the study's approach to the following issues: (a) rationale for a mixed methods study; (b) research design; (c) quantitative phase; (d) qualitative phase; (e) validity; (f) ethical consideration and (g) researcher positionality.

Rationale for a Mixed Methods Study

To resolve the research questions, the study used a mixed methods approach (Tashakkori & Teddlie, 2010). Mixed methods research has been described by Johnson, Onwuegbuzie and Turner (2007), as a research approach where, “a researcher…combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (p. 123). The important elements of the mixed methods approach “involves the collection, analysis, and integration of *both* quantitative and qualitative data” (Creswell, 2015, p. 3).

The “core characteristics of mixed methods research” incorporates methods, a philosophical underpinning and research design, wherein the researcher: undertakes the rigorous and persuasive collection and analysis of qualitative and quantitative data; mixes the qualitative and quantitative data concurrently, sequentially or by embedding them within each other; prioritizes either or both data forms; utilizes these techniques in a study or in multiple stages; uses theory and philosophy to frame these techniques; and brings together these techniques into a unique design that gives direction to the study (Creswell & Plano Clark, 2011).

The rationale for choosing a mixed methods approach in this study centers around the fact that approaching the research questions by employing either solely qualitative or quantitative methods will not represent accurately the full breadth and depth of the program being examined. Accordingly, it has been determined that “[q]uantitative research does not adequately investigate personal stories and meanings or deeply probe the perspectives of individuals, [and] qualitative research does not enable us to generalize from a small group of people to a large population. It does not precisely measure what people in general feel" (Creswell, 2015, p. 15). Integrating both qualitative and quantitative research thus allows the strengths of one approach to address the weakness of the other, and vice versa.

In addition to developing further the findings of the other research method, what Alan Bryman (2006) refers to as "expansion", in order to substantiate the findings that will arise individually from either quantitative or qualitative research, a mixed methods approach provides the opportunity for triangulation of findings (Bryman, 2006; Greene, Caracelli, & Graham, 1989). Additionally, a mixed methods approach more aptly provides for 'complimentarity' (Greene, Caracelli, & Graham, 1989) – wherein, "the results from one method [are used to] elaborate, enhance, or illustrate the results from the other" (p. 266).

Research Design

In its design, this study uses a variant of explanatory sequential design (Creswell & Plano Clark, 2011) – hereinafter ESD. ESD is operationalized in two discrete phases, which yet intermingle with and inform each other. In this design, quantitative data is first collected and analyzed, following which qualitative data is then collected to explain the findings of the quantitative analysis. The results of the quantitative data is utilized to qualify decisions about specific questions in the qualitative phase, specifics about the sample population to be interviewed, and the other qualitative data to be collected.

ESD has several advantages among which are the fact that it is straightforward to execute since each type of data is collected on its own; while the quantitative data's analysis impacts and informs the qualitative data collected, the analysis for each strand maintains its own section in the data analysis. This study uses a variant of ESD (see Table 3.1 below) in that for time considerations and to facilitate simultaneous Institutional Review Board (IRB) approval for both the quantitative and qualitative phases of this study, the decision was taken by the author to purposively identify the groups of individuals to be interviewed in the qualitative phase of the study and general questions that will be asked of them in the semi-structured interviews, while still allowing the analysis of the quantitative data to inform the more nuanced, specific questions asked of the interviewees. There is an identification, in a general way, of the types of data that will be analyzed. In a true ESD, the analysis of the quantitative strand will dictate fully who is interviewed in the qualitative phase, the questions these interviewees are asked, as well as, the supporting data that is collected for analysis in the qualitative phase.

Table 3.1 Model of ESD variant

Procedure	**Data**	**Product**
Quantitative Analysis		
Cross-sectional web-based survey	GATE graduates – n = 746	Descriptive statistics Regression analysis Cross-tabulation Self assessment of overeducation
Qualitative Analysis		
Expert Interviews	Interviews with 28 persons from the following groups: graduates, university administration, politicians and business sector	Understanding of stakeholders' perception of GATE's impact on employment

Source: Author

Sampling - Quantitative Phase

Since the primary qualification for accessing the GATE program to finance higher education is being a citizen of Trinidad and Tobago, the population of this mixed methods explanatory sequential study consisted of citizens of Trinidad and Tobago who have graduated from a local or regional TLI after 2008 and utilized GATE funding to pay for their post-secondary education. A graduation date of 2008 was used since the version of GATE being examined came into existence in 2006, and at the minimum two years would have been required to obtain an Associates Degree – the lowest level of higher education funded at that time.

At the quantitative phase of the study, a cross-sectional survey design (Cohen, Manion, & Morrison, 2007) using purposive sampling was used. In a cross-sectional survey, a sample is derived such that it represents "individuals of different ages, different occupations, different educational and income levels, and residing in different parts of the country" (Cohen et al., 2007, p. 213). The inclusion criteria for participants in the survey was: (1) participants are citizens of Trinidad and Tobago; (2) graduated from a local or regional TLI funded by the GATE program; and (3) resident in Trinidad and Tobago. The survey instrument was designed by the researcher and pilot tested (Light, Singer, & Willett, 1990) on N=5 participants who meet the inclusion criteria for clarity of instructions and questions (Reips, 2002).

The survey was designed using Qualtrics, an online survey design and analysis tool. The survey was administered online at the web address http://www.TTGateStudy.com. A simple domain was purchased, to allow for easy memorization of the survey address since

Qualtrics issues a unique web address that contains many characters. To increase the response rate for the survey, a multiple site entry technique (Reips, 2002) was adopted. The multiple site entry technique (Reips, 2002) promotes having numerous websites and/or postings linking to the website of the survey.

A newspaper advertisement appearing on four days was placed in the Trinidad Guardian – a local newspaper with the highest daily circulation (see Appendix B). The advertisement appeared in the Career, Business and Sports sections of the newspaper. Additionally, due to the relevance of the topic, the researcher's study was the feature of an article in the Business Guardian of the Trinidad Guardian of October 1, 2015, which in addition to describing the researcher's study, also highlighted the web address of the survey instrument for readers of the article to complete the survey (See Appendix C).

Further, the researcher was interviewed on local cable television for two hours on September 29, 2015, about his academic trajectory from Trinidad to Columbia University, and used this occasion as well to disseminate the survey's website address. A subsequent 30-minute radio interview on i95.5FM, a local radio station with the greatest listenership on September 30, 2015, discussing the GATE program, was also used to discuss the researcher's study and to disseminate the survey's website address. The researcher further utilized the social media tool of the Qualtrics software to facilitate snowball sampling, allowing survey participants to recommend the survey to their peers.

Data Analysis – Quantitaive Phase

The survey data was exported from Qualtrics in a format recognized by SPSS, a statistical analysis tool marketed by IBM. Version 23.0 of SPSS was used by the researcher for analysis. In addition to using descriptive statistics to analyze the responses of survey participants, explanatory variables were identified to explain the occurrence of overeducation. These explanatory variables were derived from the demographic, educational and employment data supplied by respondents. Cross-tabulation and regression analysis was used to understand the relationship between variables, thus identifying those variables which significantly impact the incidence of overeducation among the population of higher education graduates in Trinidad and Tobago who have benefited from GATE funding.

Survey responses to the three (3) questions were used in the instrument to determine the incidence of overeducation among graduates were used to aid in the classification of overeducation or non-overeducation. The Self Assessment method (Dolton & Vignoles, 2000) of determining overeducation is used in this survey instrument. This is achieved through the inclusion of the following questions for answer by survey respondents:

1. Do you consider you have skills or qualifications to do a more demanding job than the one you have now?
    a. Yes
    b. No
2. Has your formal training or education provided you with the skills needed to perform your current job?
    a. Yes
    b. No

3. To what extent is your formal training or education related to your current job?
    a. Very Much
    b. Somewhat
    c. Undecided
    d. Not Really
    e. Not at All

Sampling - Qualitative Phase

Within the framework of a critical policy analysis, as discussed in Chapter 2, examining the viewpoints of various stakeholders as they interpret the impact of the policy under examination in the study is of importance. Accordingly, expert interviews were conducted to understand the stakeholders' perception of the impact of GATE on employment in Trinidad and Tobago, and more broadly, the effects of the massification of higher education in Trinidad and Tobago.

Table 3.2 Interview Participants

Level	Sample Size	
Graduates	N = 15	Graduates from TLIs derived from Self-Assessment of Overeducation survey
Administrators	N= 5	Senior Administrators of TLIs
Business	N = 3	Chairmen of local Chambers of Business and Manufacturing, and business owners/executives
Political	N = 5	Senior administrators from Ministry of Education, Tertiary Education Division; former cabinet member of the Government of Trinidad and Tobago.

Source: Author

Interviews of Graduates:

A semi-structured interview protocol was developed which was revised, as needed, to add additional probing questions based on analysis of the Quantitative Phase of the study. At the Graduates level, this purposive sample was derived through a link at the end of the anonymous Qualtrics survey asking for volunteers who would like to assist further by being interviewed. Respondents were asked to provide their email address which was delinked from their survey response. One hundred and forty two respondents supplied their email addresses, and an email was sent to each respondent inviting them to an interview during the week of October 25, 2015. Respondents were provided a link to an online reservation system at http://youbook.me, with twenty reservations spots. After accounting for cancellations and no-shows, fifteen (15) graduates turned up for their scheduled interviews and were interviewed, allowing samples to be "chosen that possess or exhibit a very wide range of characteristics or behaviors" (Cohen, Manion, & Morrison, 2011, p. 157). These graduates were employed in both the public and private sectors, and all had their higher education funded by the GATE program.

Since GATE funding is restricted to citizens of Trinidad and Tobago, all interview participants at the Graduate level were asked to confirm their Trinidad and Tobago citizenship. These participants were all beneficiaries of GATE funding for their program of study. With the focus of this study being the impact of GATE on the employment outcomes of graduates in Trinidad and Tobago, all of the interviewees were resident in Trinidad and Tobago and were employed. No beneficiaries of GATE who migrated were interviewed for this study. Interviews with each graduate lasted between 30 minutes and 45 minutes.

Interviews with Non-graduates:

At the Institutional level, emails were sent to the five private TLIs that were most frequently mentioned in the survey responses collected in Qualtrics. It was confirmed that these private TLIs were registered with the ACTT – a prequalification for an institution to receive GATE funding. Additionally, it was also confirmed that these TLIs were GATE-qualified as of the 2015 Academic Year as designated by the Ministry of Education, Tertiary Education Division. Since interview questions center around the employment outcomes of graduates, it was important that the selected TLIs have graduated at least one cohort of students since GATE qualification. Emails were sent to the publicly listed email addresses of the President/Chief Executive Officers found on these institutions' websites. Two institutions replied in the affirmative and interviews were scheduled with these administrators. It was also confirmed before meeting with these administrators that their jobs involved interacting with policies related to GATE. Interviews ranged between 60 and 90 minutes each.

The main administrators of the three large public TLIs are publicly known and each were emailed a request outlining the purpose of my study. In total emails were sent to eight individuals, of whom three responded in the affirmative. It was confirmed that each of these individuals were administrators at their institution for more than four years, giving them the requisite experience with the GATE program. Interviews ranged between 45 minutes to one hour.

At the Occupational level, emails were sent and follow-up calls were made to the heads of the seven major Chambers of Commerce in operation in the country. These persons were selected since they have a birds-eye view of employment trends in Trinidad and Tobago, and having been business persons of longstanding heading individual companies, are able to give context to the dynamics of hiring qualified individuals in their respective fields, as well as among their Chamber's membership. Two senior executives responded in the affirmative and interviews were scheduled and conducted. A third business chamber recommended a businessman who they thought was best suited to the nature of the study, since his business involved preparing graduates at all levels for the job market. These interviews with businesspersons lasted between 45 minutes and one hour.

Finally, at the Government level, emails were sent to nine current and past ministers of Finance and Higher Education who would have had intimate knowledge of the GATE program. Despite promises from four politicians to facilitate my request, only one politician kept his promise and made himself available for an interview. In seeking to obtain an interview with the Minister of Tertiary Education and Skills Training, at the time, staff at the ministry referred my request to the division directly overseeing the GATE program and from this referral, four senior administrators from the Ministry of Education, Tertiary Education Division were interviewed. This ministry is responsible for the day-to-day administration of the GATE program, and its administrators were best suited to be interviewed on the administration and effectiveness of GATE. These interviews lasted between one hour to one hour and a half.

Sampling - Document Analysis:

To add to the richness of data to be collected via the semi-structured interviews, data connected to GATE was collected from various sources. Among the data to collected was (1) policy documents, parliamentary contributions and any other official data referencing the implementation and operationalization of GATE; and (2) newspaper articles referencing GATE (Table 3.3).

Trinidad and Tobago has three daily newspapers – the Trinidad Express, the Trinidad Guardian and Newsday. Of these three, only two (Trinidad Express and Trinidad Guardian) had online databases which allowed for targeted searches of past issues of at least 5 years in the past. Utilizing this search feature in the newspapers identified, I proceeded to search for the term " "GATE" + "education" ". 61 Trinidad Express articles met the criteria of discussing the GATE program, with the oldest available from the database being published on August 19, 2010. Additionally, 123 articles were obtained from the Trinidad Guardian online repository, with the oldest bearing a publication date of July 24, 2009.

Table 3.3 Characteristics of Documents Analyzed

Document Type	**Source**	**Number**
Newspaper Articles	Trinidad Express	61
Newspaper Articles	Trinidad Guardian	123
Hansard Transcripts of Parliamentary Contributions	Parliament of Trinidad and Tobago	48
Policy documents and Ministerial statements	Government of Trinidad and Tobago	21

Source: Author

With limited access to politicians for interviews, statements made by politicians in the Parliament of Trinidad and Tobago were sought. Searching the Hansard feature of the Parliament's website for the terms " "GATE" + "education" " returned 48 documents representing 48 sittings at which reference was made to the GATE program. Hansard is sorted by debate days. Thus one sitting which would have been identified as fitting the search criteria may have contained contributions by several Members of Parliament making reference to the GATE program on the occasion of that debate. Additionally, budget statements were treated as unique Hansard documents.

Additionally, the websites of the Ministry of Education and the Ministry of Tertiary Education and Skills Training were searched for policy documents addressing the GATE programs and public statements/speeches made by Ministers regarding the GATE program. Twenty one such statements or policy documents were identified for analysis.

Data Analysis – Qualitative Phase

Interviews conducted in the Qualitative phase were audio recorded, after agreement by the interviewee, and a verbatim transcription was made. Recognizing that codes can come from literature, data and researcher insights, in addition to interview transcripts, all document data and researcher insights was stored and indexed in *NVivo for Mac* to allow for coding and the development of themes. NVivo was used to (a) organize all data; (b) allow for immersion in the data; (c) generate categories and themes; (d) code data; (e) interpret data via analytic memos; (f) search for alternative understandings of the data; and finally (g) to write the report.

Validity

Questions of the quality of data collected, the results and the conclusions drawn are of concern to both qualitative and quantitative researchers, and thus are also of concern in mixed methods research (Creswell & Plano Clark, 2011). In designing the Quantitative phase of this study, care was taken to significantly reduce the threats of internal and external validity. For internal validity, the impact of selection bias was noted (Creswell, 2012). More importantly, as it applies to survey design as was proposed in this study, external validity is of paramount importance. The extent to which the results of quantitative analysis can apply to the larger population can only be assured with some certainty if great care is made in choosing a representative sample (Creswell, 2012; Creswell & Plano Clark, 2011).

The validity concerns of qualitative research are no less significant. Validity in the Qualitative phase is used to draw inferences as to whether the accounts portrayed by the researcher are "accurate, can be trusted and is credible" (Creswell & Plano Clark, 2011, p. 211). Particularly for case study data, to assure validity in valuable data to be collected, Yin's (2009) promotion of a "chain of evidence" (p. 122) will be adopted in this study. A chain of evidence requires the researcher to make meticulous notes of every event and its details, as well as decisions made, to allow an external party the ability to recreate every step from the start of the project through the conclusions that are derived. Ultimately, in either form of research, it is critical to remember that "validity is a goal rather than a product" (Maxwell, 2005, p. 105).

Ethical Considerations

Deception

No deception was used in this study. The purpose and nature of this study was clearly communicated to all participants.

Confidentiality

Trust in the researcher is paramount when undertaking academic research (Horvat & Heron, 2013). At all times, the names and specific titles of individuals and organizations will be protected and pseudonyms used. Efforts will be made to remove all personally identifiable data as much as is practical. Particularly in the case of political figures, interviewees will be notified that because of their intimacy with the subject being explored, the information they supply may be personally identifiable. During data collection and analysis, it will be the aim of the researcher to only maintain digital files which will be stored on personal devices that are password-protected and encrypted. In the limited cases where physical data is in the possession of the researcher, it will remain stored in a locked container.

Informed Consent

Informed consent was required before any participant contributed to this study. Participants were given written notice of the nature of this research study, and were made sensitive to all benefits and risks that are associated. Participants were made to sign an Informed Consent declaration in duplicate, with both the participant and the researcher maintaining a copy of such consent. No minors (participants below the age of 18) participated in this study.

Researcher Positionality

Having left Trinidad and Tobago at the age of eighteen to pursue a college education in the United States, and subsequently a doctoral degree, the researcher fits the classic ‘insider/outsider’ positionality. Of benefit to the study is the fact that the researcher maintains constant contact with his roots in the country through multiple visits each year, maintaining contact with family and friends who remained in Trinidad and Tobago to pursue university education or enter the world of work directly after high school. The researcher is fully cognizant of the culture of the research site, as well as, maintains knowledge of the current events and popular culture through the daily reading of local newspapers and listening to radio and television talk shows and current event programming. With family and friends being recipients of GATE funding, the researcher also enters the study with a working knowledge of the program.

The fact that the researcher has not ‘lived’ in Trinidad and Tobago for the past 17 years, paints him as a foreigner to locals. In interacting with students in the qualitative phase, as well as, in attempting to recruit participants for the online survey, the researcher may have been unfairly characterized as the ‘lucky one’, who was able to leave the island to enjoy the ‘milk and honey’ of the USA. Some subtle animosity can be expected from participants for whom migrating to the USA remains an elusive goal.

Chapter 4

The Presence of Overeducation

In relating the findings of the survey insofar as overeducation is perceived among the graduates in the sample to be a major issue, it is imperative that one first understands the current labor market realities in Trinidad and Tobago. Accordingly, this section examines the present structure of the labor market and the outsized dominance of the government as the largest single employer in Trinidad and Tobago; and the type and availability of jobs in the private sector. Additionally, the experiences of these graduates in the sample must be taken within the context of the historical unemployment rates in the country since the advent of the GATE program.

Public Sector Employment

As in most former British postcolonial countries, the public sector in Trinidad and Tobago is set up in a heavily bureaucratic fashion. Individual ministries are headed by a Minister, appointed by the Prime Minister, who directs the individual ministry in relation to the policy directives of the government in power at the time. The de facto Chief Executive Officer of each ministry is the Permanent Secretary, appointed by an independent Public Services Commission. Promotions and hiring within and between ministries are also facilitated by the Public Services Commission after the requisite publishing of vacancies and interviews, which in the public service can take several months to over a year for each position. As opposed to being meritocratic, the public service in Trinidad and Tobago, fifty four years after independence from the British is still based on seniority. One largely enters the public sector at the lowest rung and is promoted through the ranks as persons in higher ranks are promoted or retire, with the most senior person in terms of years served at the lower rank in the public service being 'on top of the pack' for promotion.

In 2014, employees in the public services accounted for twenty five percent of all employed persons in the country (International Monetary Fund, 2014). This figure only takes into account those employed directly in the bureaucratic public service of ministries, departments and government agencies. It does not take into account for example workers whose employers are state enterprises – organizations that were set up by the government along a private sector model meant to improve efficiency and delivery of specific projects. These state enterprises range from the highly profitable National Gas Company, which purchases all natural gas by multinationals operating in the country and resells it to local industrial consumers; to the Rural Development Company, which has a mandate of executing rural development projects identified as being high priority by the government. There are over 100 of these state enterprises.

Additionally, the employees identified as being part of the public service in the above IMF calculation do not include those citizens 'permanently' employed in temporary employment programs such as the Unemployment Relief Program (URP) or the Community Environmental Protection and Enhancement Program (CEPEP). These two programs pay on average TT$24.00[1] per hour, which is above the national minimum wage of TT$15.00,

[1] Exchange rate USD$1.00 = TT$6.30

albeit the participants in these programs work a maximum of five hours daily. In 2012, workers in these programs were considered to be "part of the community, social, and personal services sector" which accounted for thirty four percent of those employed in the country (see Table 4.1 below). These workers are typically unskilled or low skilled since they are usually involved in road maintenance, beautification and small neighborhood construction projects.

As Table 4.1 clearly shows, despite the economy of Trinidad and Tobago's reliance on the revenue derived from the production and export of oil and natural gas, this sector is not a huge employer of workers in the country. In fact, this sector accounts for a mere 3.2% and 3.3% respectively in 2011 and 2014. Additionally, the Distribution of Employment by Sector as represented in Table 4.1 demonstrates that most of the jobs are located in the sectors of the economy providing services, the majority of jobs in which require less than a university education.

Table 4.1 Distribution of Employment by Sector in Trinidad and Tobago 2011 and 2014

Sector	**2011**		**2014** (through 09/2014)	
	Employees (000s)	**%**	**Employees (000s)**	**%**
Agriculture	21.7	3.7	22.3	3.5
Petroleum and Gas	18.8	3.2	21.2	3.3
Manufacturing (including Mining and Quarrying[2])	50.2	8.6	49.5	7.7

[2] Quarrying represents the extraction of stone, rock and other aggregate from quarries to be used in the construction sector

Construction (including electricity and water)	97.7	16.7	105.7	16.5
Transport, storage and communications	40.8	7.0	43.6	6.8
Other services:	356.2	60.8	396.8	62.1
Wholesale and Retail	*105.0*	*17.9*	*117.4*	*18.4*
Community, social and personal services	*193.9*	*33.1*	*219.5*	*34.3*
Finance, insurance and real estate	*55.3*	*9.4*	*55.8*	*8.7*
Unclassified	2.0	0.3	4.1	0.6
Total Employment	**585.4**	**100.0**	**639.1**	**100.0**

Source: Central Statistical Office of Trinidad and Tobago 2011; 2014

With the government playing such an oversized role in the labor market of Trinidad and Tobago, it is only natural that those graduating from higher education institutions look to the government to provide jobs. With the significant lag in making permanent appointments in the public service, one of the contemporary realities of employment by the government has been the creation of short-term contract positions in the public service. These contract positions range in length from six months to one year terms with non-guaranteed renewable terms of the same length. In addition to contract workers, the public service has also created another class of workers classified as temporary appointments – assigned to specific projects lasting no more than three months in duration. Mr. Jones, a former member of the cabinet of Trinidad and Tobago, indicated that this creation of contract positions and temporary appointments goes back at least twenty five years and remains one of the biggest issues affecting the public service, insofar as it affects productivity in government offices (Interview, November 17, 2015).

In addition to these temporary appointments, the government also maintains an On the Job Training Program (OJT) which employs citizens in three categories (secondary school graduates; undergraduates; and graduates), with the aim of giving these persons necessary workplace skills. The reliance on non-permanent public sector workers, without the commensurate job security and retirement benefits, is highlighted in the IMF's 2014 Article IV Consultation Report for the country which observed that in the public service "temporary staff increased from 1,920 in 2005 to 12, 636 in 2011, while new permanent positions declined from 916 to 628" (p. 21) during the same period. To maintain an 'artificially' low unemployment rate, it is widely believed that the government merely increases funding and thus participation in URP and CEPEP, and additionally increases the number of contract and temporary positions in the public service, resulting in unemployment rates in the five years under examination ranging from a low of 3.3% to a high of 5.9% (see Table 4.2).

Additionally, the size of the labor force has been trending upwards for each of the years examined. It should also be noted that the participation rate of females in the labor market remains low despite the fact that enrolment in higher education in Trinidad and Tobago is dominated by females. In 2001/2002, the enrolment at UWI St. Augustine was 60% female and 40% male, whereas by 2013/2014 females composed 63% of total campus enrolment at the same institution (University of the West Indies, 2014).

Table 4.2 Trinidad and Tobago Labor Force 2010-2014

	2010	**2011**	**2012**	**2013**	**2014** (through September)
Population [non-institutional 15 years and over] **(000s)**	996.9	1,006.5	1,044.1	1,059.6	1,062.9
Labor Force **(000s)**	619.0	611.6	646.0	650.2	661.1
Persons with Jobs **(000s)**	582.3	581.9	614.0	626.3	639.2
Persons without Jobs **(000s)**	36.7	29.7	32.0	23.9	21.9
Participation Rate (%) Male Female	62.1 *73.4* *50.9*	60.8 *72.3* *49.3*	61.9 *72.2* *51.7*	61.4 *71.6* *51.2*	62.2 *72.2* *52.3*
Unemployment Rate (%) *Male* *Female*	**5.9** *5.2* *7.0*	**4.9** *3.9* *6.3*	**5.0** *4.1* *6.2*	**3.7** *3.0* *4.6*	**3.3** *2.8* *4.0*

Source: Central Statistical Office of Trinidad and Tobago 2010; 2011; 2012; 2013; 2014

Private Sector Employment

Employment in the private sector in Trinidad and Tobago can largely be found in the construction, manufacturing and service sectors (Table 4.1). These jobs by their very nature, are not among the highest paid jobs in the economy, and additionally, may require little or no skills for entry-level positions. However, an anomaly exists in that despite the competition with workers who otherwise will be attracted by temporary government employment, entry-level jobs in the fast food industry for example, still require that prospective employees have a full high school certificate. That is, passing grades in five subject areas after five years of secondary school obtained from the Caribbean Examinations Council (CXC). When one compares the salaries paid by these service industry entry-level positions, and the little effort required and comparably higher salaries paid by CEPEP and URP for example, the private sector is under tremendous pressure to attract quality employees, to the extent that serious consideration is being made to request government permissions to hire foreign labor in this industry. Ms. Joseph, an executive in one of the larger business chambers in the country stated:

> [We are] trying to see if we could get approval to bring in foreign labor for the quick service restaurant, hotel and retail industry. The work ethic is just bad. It's sad. It has a lot to do with the government has put in so many ‘made for work’, makeshift work programs in place. There's no proper supervision. There's no demanding you must do X, Y, et cetera, or else you lose your job. They go in there, and they work 4 hours a day, or so, and they figure, well, that's all they have to do.
>
> When KFC then tells you, I want you to work 8 hours a day, it's like, “me work 8 hours a day?” “Why should I work 8 hours a day and slave myself, when I can go and work 4?” What you find is even though the private sector pays more, actually, than the CEEPEP and URP, and so; when they work out all the free time that they have, they prefer to take the lower pay, and not do the hard thing, right? People come in there, and they work for 2 or 3 days, then they pick up their bag and go, “well, I'm not doing this.” You have to work on a Saturday. You have to work on a Sunday. You may have to work on a public holiday.
>
> The work ethic is just not there at all. It makes it very, very difficult to get productive workers. Productivity is at a very, very low rate. Again, it depends on how you measure productivity. We don't have one standard measurement in Trinidad and Tobago. We do know that for what we pay, we don't really get... (Interview, October 26, 2015)

This chapter focuses on bringing light to the first research question on the presence and facilitators of overeducation in Trinidad and Tobago, as evidenced in those higher education graduates who would have been beneficiaries of the GOTT’s introduction of the higher education finance program known as GATE. This chapter is divided into two basic sub-sections which address the two elements of this research question: (i) the presence of overeducation; and (ii) the contributing factors of overeducation. The definition of overeducation and the perception of overeducation among graduates, living in Trinidad and Tobago, who used GATE to fund their higher education in Trinidad and Tobago, as derived from the survey data is explored in this first sub-section. Further, in this sub-section, an analysis of overeducation as identified by interviewees is highlighted to give depth to the findings of the survey data. This is then followed by an examination of those factors that facilitate overeducation among those graduates, as derived from interview participants in the study. Throughout this chapter, the study's findings are presented in line with the mixed methods approach adopted in this study's methodology as outlined in the previous chapter. Supporting findings, whether sourced from survey data, interview transcripts, government statistics and documentation or newspaper articles are presented simultaneously in order to competently answer the research question.

The Presence of Overeducation among Graduates in Trinidad and Tobago

For the purpose of this study, overeducation is defined as a higher education graduate being employed in a job which requires no higher education qualifications or qualifications at a lower level. This is further explicated by Rumberger's (1981) identification of three instances wherein overeducation is thought to be in existence: (1) a reduction in the fiscal returns to education at a specific level, particularly represented by earnings, when compared to previous fiscal returns at that same level at past times; (2) the job one expects as a result of a certain level of education is not realized; and (3) a mismatch between the level of education of an employee and the educational prerequisite of their job.

Determining the graduates' allocation to the various classification of job match was achieved through adaptation of the following three questions from Alba-Ramirez & Blazquez (2002) in the survey:

(1) Do you consider you have skills or qualifications to do a more demanding job than the one you have now?
(2) Has your formal training or education provided you with the skills needed to perform your current job?
(3) To what extent is your formal training or education related to your current job?

Using the survey logic component of the Qualtrics software, these questions were only asked of those graduates who indicated via an earlier survey response that they were 'employed'. Based on the responses received from survey participants to Question 1 above, survey participants were split into two groups: the *overeducated*, those who indicated that they 'YES' they had skills or qualifications to do a more demanding job than the one they currently had; and the *non-overeducated*, those whose response to the question was 'NO'.

Graduates were further classified based on their responses to Questions 2 and 3. This further classification allowed for the creation of three (3) subcategories of overeducated workers: Type 1 overeducated workers, *OV1*; Type 2 overeducated workers, *OV2*; and Type 3 overeducated workers, *OV3*. Among the non-overeducated workers sample determined by Question 1, Questions 2 and 3 allowed for the further creation of adequately educated workers in the Type 1 classification, *AD1*; adequately educated workers in the Type 2 classification, *AD2*; and non-overeducated workers in the Type 3 classification, *NOV3*.

Table 4.3 Outcome Classifications based on Question Responses

Question	**Outcome Classification**
IF, Question 1 = Yes AND Question 2 = Yes AND Question 3 = Not Much or Not at All	*OV1 (Type 1 Overeducated worker)*
IF, Question 1 = Yes AND Question 2 = Yes AND Question 3 = Quite or Very	*OV2 (Type 2 Overeducated worker)*
IF, Question 1 = Yes AND Question 2 = No	*OV3 (Type 3 Overeducated worker)*
IF, Question 1 = No AND Question 2 = Yes AND Question 3 = Not Much or Not at All	*AD1 (Type 1 Adequately educated worker)*
IF, Question 1 = No AND Question 2 = Yes AND Question 3 = Quite or Very	*AD2 (Type 2 Adequately educated worker)*
IF, Question 1 = No AND Question 2 = No	*NOV3 (Type 3 Non-overeducated worker)*

Using the Outcome Classifications listed above in Table 4.3, and descriptions developed by Alba-Ramirez & Blazquez (2002) applied to interviewees, a typology of the overeducated was developed using the shared experiences of interview particpants (Table 4.4). *OV1* will be exemplified by interviewee, Shannon, a graduate from a private Law School who received a Bachelor of Laws (LL.B.) degree but lacks the Legal Education Certificate (LEC) which will allow him to practice law. He is currently employed as research assistant at a law school. His degree allows him to perform the job but he feels he he has skills and qualifications for a more demanding job. The classification *OV2* is seen in interviewee Karen, who has a Bachelor of Science (B.Sc.) in Environmental Science at a large, local public university and a Master of Science (M.Sc.) degree in

Renewable Energy from a large, regional public university. She is currently employed by the Ministry of Energy and Energy Affairs as an On The Job Trainee (OJT) conducting energy audits of local companies in the quarrying sector. Brianna, a graduate of a large, local private university, has a Bachelor of Science (B.Sc.) in Psychology and is currently employed with a marketing firm conducting surveys on customer behavior. While indicating that she has the skills and qualifications for a more demanding job, Brianna indicates that this job did not require a university degree to obtain it. Brianna will fall in the outcome classification of *OV3*. Accordingly, non-overeducated graduates who are classified as *NOV3*, are those graduates who believe their education has not equipped them with the skills needed to perform their current job. Likewise, the adequately educated graduate, *AD1*, if they believe their education has equipped them for their present job, although this education is not much or at all related to the job. *AD2*, classifies the adequately educated graduate whose education is quite or very closely applicable to the work they perform.

Table 4.4 Typology of the Overeducated

Classification	Participant	Experience
OV1	Shannon	• LLB from Private TLI • Can't gain admission to LEC at UWI • Employed as a research Assistant at a private law school
OV2	Karen	• BSc in Environmental Science from UWI • MSc in Renewable Energy from UWI • OJT at Energy Ministry conducting audit on use of diesel in quarrying companies
OV3	Briana	• BSc in Psychology from large private TLI • Conducting surveys for a marketing company • Job requires a secondary education

Source: Interviews

A cross-tabulation of the survey responses to the three job match questions respondents were asked in the survey after indicating that they were GATE graduates and currently employed, shows that an overwhelming majority consider themselves to be overeducated. Table 4.5 shows the breakdown of the graduates' perception of the overeducation classification they will fall into. Type 1, overeducated graduates, thus comprises of those graduates in the OV3, OV2 and OV1 categories; cumulatively represented by 493 graduates or 90.1% of the sample. Likewise the adequately educated graduates, comprising of AD1 and AD2 graduates, are 8.4% or 46 graduates. The Non-overeducated graduates, Type 3, are represented by 8 graduates in the sample or 1.5%. These finding display the glaring perception of being overeducated among the sample of graduates with GATE-funded degrees in Trinidad and Tobago.

Table 4.5 Sample distribution of survey of GATE graduates.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	OV3	91	12.2	16.6	16.6
	OV2	273	36.6	49.9	66.5
	OV1	129	17.3	23.6	90.1
	NOV3	8	1.1	1.5	91.6
	AD2	42	5.6	7.7	99.3
	AD1	4	.5	.7	100.0
	Total	547	73.3	100.0	
Missing	System	199	26.7		
Total		746	100.0		

Source: Survey

With labor market surveys in Trinidad and Tobago not being detailed enough to determine the educational requirements for different types of jobs, and the specific educational attainment of employees at different categories, a self-assessment of overeducation was applicable for the purposes of this study. By directly asking survey respondents their opinion on the match between their occupation and their skills, although this is a subjective determination of overeducation, sufficient information is obtained from the respondents to determine whether a mismatch exists between their current employment and their educational attainment. It should be noted however that one of the prime shortcomings of this method of identifying the presence of overeducation has been its propensity to overstate actual values.

From Table 4.5, it should be noted of the 746 employed graduates in the sample, 199 were missing responses which were critical in assigning them to one of the overeducated categories. This represents some 27% of the sample. An analysis of this ‘missing’ category shows that Whether the main outcome is missing had a significant relationship with ethnicity. Participants self-identifying as “East Indian” were disproportionately missing values, while the opposite was true for those participants self-identifying as "Africans". Further, on average, those missing the main outcome were significantly younger (27.8 vs. 30.6). This is represents a 0.4 standard deviation difference.

In examining the composition of the 547 employed survey participants, as reflected in Table 4.6, it is instructive to note that like the higher education sector in Trinidad and Tobago, females comprised a larger segment of of the sample (78.8%), when compared to males. Likewise, African, East Indian and Mixed ethnicities comprised 98% of the sample, reflecting the racial composition of the country.

Within the context of the the GATE program providing windows of opportunity for individual educational advancement, it is instructive that survey participants were provided with an opportunity to receive a tertiary level qualification when their parents to a large extent did not. Sixty seven percent of respondents indicated that their father's highest level of education was at secondary school or less. Likewise, 71.8% of survey participants indicated that their mother had gone no further than secondary school in their educational attainment. These figures clearly mirror one of the advertised accomplishments of GATE – creating generational access to higher education in families where previously that was not possible.

Table 4.6 Descriptive Statistics of Survey Sample

Demographic Category	**N (547)**	**Building Percent**
Gender:		
Male	431	78.8
Female	116	21.2
Ethnicity:		
African	246	45.0
East Indian	120	21.9
Mixed (Other)	113	20.7
Mixed (African and East Indian)	57	10.4
Caucasian	3	0.5
Chinese	3	0.5
Other Ethnic Group	3	0.5
Indigenous	2	0.4
Father's Highest Education Attained:		
Some secondary school or less	201	36.7
Secondary School	166	30.3
Vocational	66	12.2
Bachelors or equivalent	39	7.2
Some University	32	5.9

Masters or equivalent	21	3.9
Professional Degree (MD, JD, etc.)	8	1.5
PhD or equivalent	6	1.1
Missing	8	1.5
Mother's Highest Education Attained:		
Some secondary school or less	201	36.7
Secondary School	192	35.1
Bachelors or equivalent	53	9.7
Some university	37	6.8
Vocational	35	6.4
Masters or equivalent	24	4.4
Professional Degree (MD, JD, etc.)	2	0.4
PhD or equivalent	2	0.4
Missing	1	0.2
Secondary School Type:		
Government	276	50.5
Denominational	238	43.5
Private	23	4.2
Foreign	6	1.1
Missing	4	0.7

Source: Author

A multinomial logistic regression was used to determine the extent to which the variables of age; sex; mother's educational attainment; father's educational attainment; secondary school type attended; higher education school type; or, graduate's residence before GATE enrolment (urban vs rural); influence whether a graduate who perceived themselves to be overeducated fell into one of the overeducated categories represented by OV1, OV2 or OV3 in Table 4.5 above. Of the 493 graduates who were determined to be overeducated using the self-assessment method, 466 formed part of this regression after removing cell sizes that were so small as to interfere with the regression. This sample size of 466, achieves the minimum guidelines required to establish an adequate sample size for a multinomial logistic regression (Starkweather & Moske, n.d.).

The model fitting information table (see SPSS output: Appendix G), suggests a significant model on the whole ($p<0.05$). The pseudo R-square statistic Cox and Snell indicated a pseudo R-square of .128. The pseudo R-statistic Nagelkerke suggested a pseudo R-square of .149, and the pseudo R-square statistic McFadden indicated a pseudo R-square of .069. The model thus explains somewhere between 6.9% and 14.9% of the variance in the outcomes.

According to the likelihood ratio tests, which tests for the overall effect of the variables, age had a significant main effect on overeducation category [$p<0.05$]. This suggests that age had a meaningful effect in the overall model (see Table 4.7). Mother's education, fathers education, gender, secondary school type, higher education school type or residence prior to GATE enrolment did not have a significant impact on the overeducated graduate's overeducation classification. Further, while age is a significant predictor of whether a graduate falls into either OV1, OV2 or OV3, the effect is not particularly strong. The other predictors have associations with the outcome that are not even reliably different from what pure chance would produce.

Table 4.7 Likelihood Ratio Tests

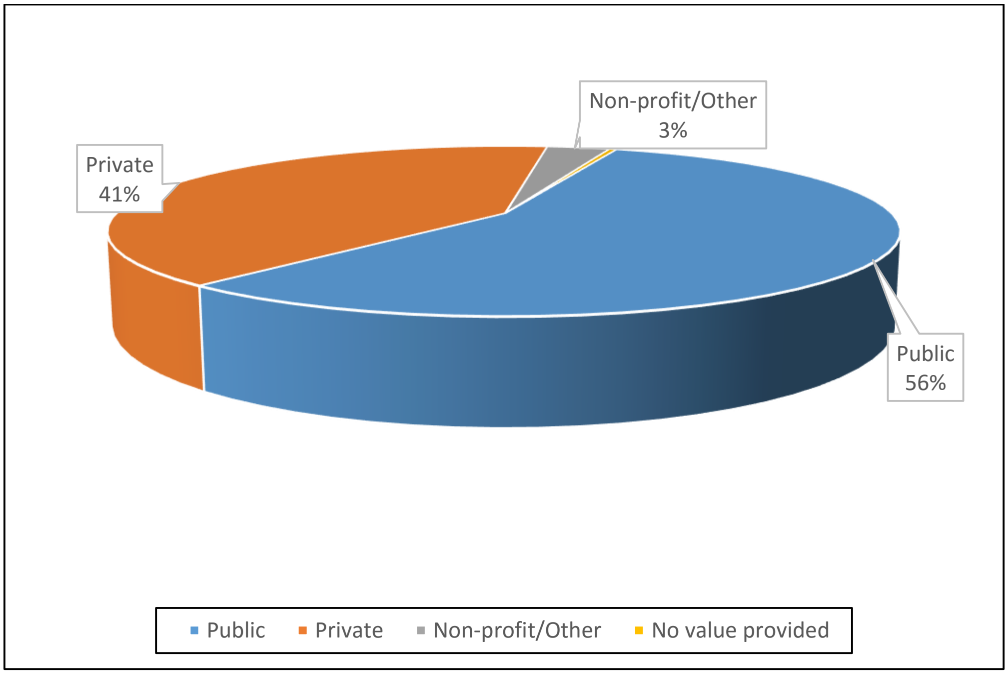
Effect	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	919.058	1101.402	831.058[a]	.000	0	.
age	924.203	1098.258	840.203	9.145	2	**.010**
mothered2	912.154	1053.057	844.154	13.097	10	.218
fathered2	906.231	1047.133	838.231	7.173	10	.709
gender	920.257	1094.313	836.257	5.200	2	.074
sectype2	914.953	1080.721	834.953	3.895	4	.420
instittype2	913.090	1045.703	849.090	18.032	12	.115
GateLG2	915.541	1089.596	831.541	.483	2	.785

This finding on the significance of age being a predictor of the overeducation category a graduate falls into, can possibly be explained by the fact that as one ages, with that comes certain career expectations and thus frustration as one's employment reality does not reflect the higher education qualification obtained. Conversely, younger graduates are more likely to have unrealistic expectations about the type of job they should have based on their education, not recognizing that education is not the sole determinant of the type of job one is to enjoy. Experience, that is, time spent in a profession, usually counts towards the type of job a worker enjoys. With more experience, in addition to the educational accomplishments of the individual, there can be expected a closer alignment between the expectations of the worker as to the job they should have and the skills that worker possesses.

Public Sector Employment of GATE Graduates in Trinidad and Tobago

This reliance on the government as a major employer in Trinidad and Tobago is reflected also in the sectoral employment of survey participants. Of the 547 GATE graduates surveyed in this study who indicated they were currently employed, 56% were employed in the public sector (Figure 4.1). A similar proportion emerges upon analysis of the fifteen GATE graduates interviewed in the study, nine of whom were employed directly by the government or a state agency in some capacity. Of these nine graduates, only four graduates had permanent government jobs, and in two out of these four cases, the interviewees had already secured permanent government employment before deciding to pursue higher education utilizing GATE funding. 41% percent of the survey participants indicated that they were employed in the private sector.

Figure 4.1 Employment of GATE Graduates by sector.



Source: Surveys

The one case where the graduate obtained a permanent position after receiving his GATE-funded degrees, was the case of Keron, who eventually became a teacher in a denominational school – this was not a straightforward process however as Keron describes:

> Well when I graduated in 2009, I applied to be a teacher that same year as a backup in the eventuality of my current job then… if I decided to change my mind again. This ability of teaching, is a good job in terms of stability and it's at least fair pay. That comfort was nice to know in the eventuality as working for private sector [jobs], private sectors are always vulnerable to economic downturns. So in that eventuality, you have a backup, so I applied probably shortly, a month or two after I graduated my first degree and I just left it like that. Probably a year after I applied to the actual secondary [school] department and that took its process…because it was a board school, I got a call in December of 2012 that a teacher was going on maternity leave. At that point in time, I was not having the best of times at my

> last job. Not really the working conditions but the actual remuneration... Not the pay itself but how they were handling my benefits was an issue at the point in time. I realized I could not have taken no more. At that point in time, [School X] called me at that point in time so they called me to come in for an interview as a leave relief for that teacher. And I basically left that job and went into teaching. It was essentially it was from January 2013 to April 2013, and that was supposed to be the end of the job. Luck would have it that in June that same year, a teacher left the school and they called me back because they felt I was a good teacher. So from September that year, I became a full-fledged teacher. (Interview, October 26, 2010)

It should be noted that even though Keron is among the few graduates interviewed to be in possession of a permanent government job (teachers assigned to all approved primary and secondary schools are paid by the government, irrespective of school format: government or denominational), he still believes he is overeducated. He has undergraduate degrees in Geography and Business Management, and a Master's degree in Project Management. He is a Geography teacher in a secondary school, for which he has received no formal teacher training. His employment he believes is not tied directly to his training or work experience, but rather is a case of him being in the right place at the right time. His knowledge of geography however equips him with the knowledge necessary to understand and communicate the course content to his students. Keron indicates that to be promoted at his current job to the positions of either Head of the Geography Department or Dean at School X, it is required that he return to a local public university to obtain a Diploma in Education, and even then when making more money in the education sector, he will still feel overeducated based on the qualifications he already possesses. Teaching was not the job he had in mind when accumulating his three GATE-funded degrees (Interview, October 26, 2010).

Compare the position of Keron to that of Ayanna, a 23 year-old female, who has an undergraduate English Literature degree, with a specialization of Secondary School teaching. Her degree consisted not only of taking courses in literature and linguistics, but also courses in education that covered topics like "curriculum planning, [and] classroom management and evaluation…those who chose the program wanted to become teachers" (Interview, October 29, 2015). There was also a component of student teaching where she had to visit schools and apply concepts learned in her education classes as a requirement for these education courses. However, after graduation the only job she could find is as an OJT in a primary school, where she assists with secretarial tasks in the school office and on occasion is given the chance to supervise a class when a teacher is absent. It has always been her dream to be a teacher. She has been in that job for the past year, her contract being renewed continually after three months. She vents her logic for choosing this employment opportunity:

> everybody I know does not have the actual job in my degree that they wanted. They wanted to be teachers…It is hard to go to a job that pays under your degree level when you already have a degree. So there are veterinarians I know who graduated and are working in insurance companies. I find it's ridiculous…you are a vet. You want to work with animals. The only reason they are working in the insurance company is because they want to be paid enough. So they take the job that has nothing to do with their degree…(Interview, October 29, 2015).

As opposed to being unemployed, graduates are taking any job they can get with a salary that will allow them to meet their needs. There is however disappointment when that job requires less qualifications than they possess and is not in the field for which they trained.

This disappointment is also reflected among those permanent government employees who were already in their substantive positions before deciding to pursue a GATE-funded degree. The rigidity of the public sector promotion process and the absence of meritocracy, leaves these graduates with little hope for advancement. Kevin, a 45 year-old government social worker, utilized GATE to pursue a law degree, having already been in possession of a social work undergraduate degree. His degree in law will have no impact on his salary nor is there any lawyer positions in the ministry in which he is employed (Interview, October 26, 2015). Stacy, a 37 year-old female, employed as a full-time payroll clerk in another government ministry, indicated that she pursued her Associates degree in Library Science with the hopes of being employed by the national library system. The minimum requirements for such a job is a Bachelor's degree only offered by the large public research university on the island, the University of the West Indies, St. Augustine. Her refusal to start over from scratch because that institution does not accept the Associates degree granted by the government-run community college, leaves her feeling overeducated for her current job since the job requirements are minimal.

> Question: Were there any educational requirements for your job?
>
> Stacy: Not really. My job was hereditary. As in, hereditary is not the right word, but there is a person ahead of me and she retired, and I was the next person in line for her post. So it wasn't even a matter of I needed an education. They don't care if I had an education!
>
> Question: This is just how the system worked?
>
> Stacy: It's just how the system worked. She is gone, I had the years-
>
> Question: Right, so seniority?
>
> Stacy: Seniority ruled, and I slipped into the job.
>
> Question: Okay. Did you receive any special training for the job?
>
> Stacy: Really? Oh, that's right, you're new to the land. No! There is no training.

> Question: So you just learned on the go?
>
> Stacy: You learned- you are repeating what she did. And how much of a disaster that was I learned recently how much of a disaster that was when auditors came in and was like, “okay that's not how you do it”. I'm like, “I've been doing this for 3 years because that's what I saw”. No one's standing over to anyone telling you what to do. No one is telling you. You are like: “let me go and learn to do this”- they're like, “no, we can't spare the funding”. If you want to go to learn to do it, go do it on your own. I didn’t want to be in payroll. That was the least of the things I wanted to do.
>
> Question: So in terms of, seeing that it's heavily seniority, what is the next step above you? In terms of, if you were to get a promotion?
>
> Stacy: Okay, there is no next step above me from how my system… I'm a daily paid, and I am a checker in an office. So unless they seriously- my union renegotiates everything. Because I am in an office, I am checked right there as a checker. So I'm going to stay a checker until I retire. Or unless I actually get a job out of the system. (Interview, October 30, 2015).

Just as the structure of the public service offered Stacy little help in obtaining a position for which she is qualified, four of the interviewees for this study were public sector employees on contract – a designation which brought similar frustrations. Hired initially on a six month contract “that six months was extended into another six months, and then eventually it went into three months, then three months, then three months, and everybody in the organization was like that. There were other people in the organization who had Master's, had been working for years, and they were all placed on three-month to three-month to three-month contract” (Interview with Ravi, October 25, 2015).

Graduates took their contract jobs merely because the alternative was unemployment. While Ravi indicated that his undergraduate degree prepared him for some of the job requirements of his current job, he still believes that his education prepared him for more challenging tasks and that he was overeducated. This highlights the fact that among the graduates in the survey sample who were employed, the largest percentage, 49.9% indicated that while their job was closely related to their education and their education provided them with the necessary skills, they believed that they could have done a more demanding job, classification *OV2* (Table 4.3). However, the opportunity for promotion to a more demanding job does not arise as a contract employee, and he will have to apply for a Senior Corporate Communications Officer position – also a contract position in the ministry in which he is employed, but for which there is an experience component he has not yet achieved in his time at the ministry.

> Where I work, there are four other people on my, who we're all in the same position, right? Two of those people have Master's, but they were the same age. They have our job description. You cannot be hired, you cannot ... Okay, I'm a Corporate Communications Officer now, right? There is something called a Senior Corporate Communications Officer. You cannot be a Senior Corporate Communications Officer unless you have five to seven years' work experience, whereas all of us have maybe two to five... Even if they have Master's and stuff like that, they cannot go higher than that right now, because they don't have the actual work experience. (Interview with Ravi, October 25, 2015)

The Degree Epidemic

With no other limitation besides gaining admission to a GATE-approved school being placed on the student by GATE policy, of interest in analyzing the degrees studied by the graduates was the process these graduates went through in choosing what they studied. For the graduates who started their GATE program after already having a full-time job, at best this process of choosing what to study can be described as being whimsical. It is interesting to note that for these persons, already having a job seemed to have no impact on their choice of degree. Stacy, already was employed in a ministry as payroll clerk, however, in describing how she chose what to study using GATE funding, she indicated: “[h]onestly, I was kind of bored, and I was talking to one of the officers at my job and he was like, "Well, you know, you're not doing anything. Just find something to do until anything else." The Library Information really did catch my eye. So I said “Ok, I would do that” (Interview, October 30, 2015). This excerpt challenges the expectation that there would be a closer alignment between her job at the time, the degree she decided to pursue and some examination of how this degree when earned would apply to her existing position.

Kevin, a 45 year old social worker decided five years ago to utilize GATE funding to pursue a law degree for “self-actualization”.

> Question: So do you see any impact on having a law degree in your current role as a welfare officer?
>
> Kevin: No, no.
>
> Question: Okay.
>
> What motivated you to pursue law? Because you had a Bachelor's degree which was relevant to your work, you are in, I would assume, a stable position, so that what would have motivated you to do that law degree?
>
> Kevin: I guess self-actualization, that's one, and then another thing has to be the fact that, you want to work for yourself some time, at some point in time…Yeah, yeah. So for me, at this stage of my life, it's more or less about self-actualization. Being able to assist somebody. (Interview, October 26, 2015)

This theme of pursuing the degree for the sole purpose of self-development was also echoed in another public sector worker who decided to pursue two degrees that were in no way related to her job with one of the country’s utility companies. Tasha indicated that her choice of pursuing a diploma program using GATE funding was because “[a]t the end of the day I saw it as self-development. Investing in myself. I got to do something at the university. I should say basically free, tuition free." Seeing no relation to her job in the public service at the time, I then probed why she would then pursue an MBA, knowing full well that it would have no impact on her job title or her remuneration and she again replied "It was more for myself and I said maybe in the future I just probably will look for another job somewhere else" (Interview, October 26, 2015).

In further exploring the theme of 'choice of degree' among other graduates, those entering higher education directly after secondary school, based their initial degree selection on what they thought they were good at or what they always dreamed would be their career. However, with no penalties or restrictions in the GATE funding criteria for switching programs, there was a high degree of 'degree switching' among these interviewees for their first GATE-funded degree. Ravi's initial choice of degree based on the fact that he believed "the only real options in terms of employment or a career would have been like medicine or law or something like that. That's what I started out pursuing" (Interview, October 25, 2015). He would go on to switch his major twice before settling on Communications Studies – the field in which he is currently employed. Elijah, a 27 year-old male now employed in advertising, started off pursuing a Bachelor's in Literature because it was what he was always good at in secondary school. However after a year of Literature he determined that "it really wasn't what I thought it was going to be and the theater had more ... something about it seemed more interesting and something I could actually use in everyday life, so ... I decided to go" (Interview, September 30, 2015). Karen explained her degree switch being the result of challenging prerequisites:

> Karen: I chose biology first. My first year we had to a do a bio-chemistry pre-requisite. And I failed it twice. Then I was like never again. I changed to environmental and natural resources.
>
> Question: What brought about…besides not the biology track being daunting. What pushed you into environmental sciences?
>
> Karen: I love biology and geography. I knew I wasn't going to do chemistry. I knew what I was not going to do. It was just a matter of what I wanted to so. There was agricultural sciences and stuff like that. But that wasn’t really me. (Interview, October 29, 2015)

Of the ten graduates interviewed who went directly from secondary school to pursue their degree, only two stuck with their original degree choice. Half of the other graduates switched their degree programs twice, and the other half – three times.

The sole interest of these students is the knowledge that their program will be covered by GATE and there will be no penalties incurred for switching programs – which the institutions were only too happy to facilitate. None of the students indicated any pushback by their institutions even when the new program required a different set of prerequisites and would entail a longer time at the institution in order to obtain the qualification. Mr. Williams, an administrator at a small, for-profit institution indicated that students are only interested in programs that are covered by GATE, even when a program not covered by GATE may have a better track record of gaining the student a job, such as some of the technical programs at his institution which are geared towards technical aspect of the oil and gas sector. “Students just go to where they get GATE. Students don't worry themselves… if you don't have GATE, you're not on the map… you're not considered. Students don't choose a program ... there's less and less inclination over the years to put out money, when you can get something that you consider equivalent with GATE” (Interview, November 17, 2015).

“Because GATE says I can”: Credential Stacking Among GATE Graduates

Business executive, Mr. Morris, gave the example of meeting someone at a networking event who had a degree that was unrelated to her present job, yet was about to pursue another degree that took her further away from her present occupation. When asked by Mr. Morris why that was being pursued she made the simple observance: “Because GATE says I can!” (Interview, October 26, 2015). In interviewing the graduates in the study who decided to pursue more than one degree using GATE, it was evident that the graduates were stressing the link between the degrees they attained using GATE funding and the level of wages they were expected to receive in return.

There seemed to be the widespread expectation that irrespective of whether they were working in the private or public sector, having an additional degree or accreditation of some kind, for them warranted a commensurate increase in salary- irrespective of whether they were at an entry level position, temporary or permanent position, overeducated or not. From the literature we know that with human capital theory, the years in education matters when examining the correlation between education and wages. Whereas with signaling theory, it is the degree(s) attained that is of significance. It is believed that the degree(s) attained by the graduate will serve as a ‘signal’ to future employers of the graduate’s skill and connected efficiency.

When choosing degrees, it is the belief of the majority of the graduates interviewed who had more than one degree, that having that one ‘right’ additional degree is what will be required to get that well-paying job that they believe exists. An examination of the newspaper advertisements primarily of for-profit institutions, shows that the number one advertised degree is that of an MBA. MBAs are advertised around the themes of flexibility, “holistic development”, and preparing the potential student for that future dream job. These advertisements, usually placed in prime positions of the local newspapers, display the wide variety of MBAs being offered. These degrees range from programs for which students attend classes on “Saturdays only” for a year, to those which were requesting applications with “no qualifications necessary” (Advertisement, Trinidad Express, February 2, 2016, p.22). Additionally, with the exception of the MBA program offered by the University of the West Indies’ Arthur Lok Jack Graduate School of Business, all the for-profit schools advertising MBAs, highlight the fact that they are being offered in conjunction with an accredited foreign university, “UK Based and Internationally Recognized” (Advertisement, Trinidad Express, November 17, 2015, p. 19) and in one case, an invitation to “be a cut above the rest” (Advertisement, Trinidad Express, November 4, 2015).

Four of the graduates interviewed had MBA degrees, which while not being utilized for their current job, they thought will be of some significance in the future. Karen, for example, received an MBA from a local for-profit institution, without having a Bachelor’s degree. She only has a two-year Diploma in Public Sector Management. This MBA even while classes were attended in Trinidad and taught by local instructors, was awarded by the Australian Institute of Business in Adelaide. Karen indicated that despite the sacrifice, she decided to pursue it because "You know maybe in the future, if something comes up and I have to apply for a position… I can say hey I have something on paper. I did this." (Interview, October 29, 2015). Likewise, Marvin, also received an MBA from a local for-profit institution, which awarded a degree from the UK based, Anglia Ruskin University, from which he also received his Bachelor's degree in business. Currently employed on contract with the public service, providing training sessions for OJT participants in work ethics and presentation skills, Marvin responds when asked whether his degrees have been beneficial to him:

> I would say the first degree, not the second degree. I gained a lot, the ready knowledge is based on my experiences. So my job now more focuses on, I don't think, the Masters do it. I would say partially, because the first degree it does help because that's the prerequisite. The prerequisite is to have a degree so that you can have knowledge so that you can speak to the trainees in terms of what you know. But I don't think it fully, because the MBA level is more for managing businesses, more at a managerial level. I think the position I am, it's not really helping. (Interview, October 29, 2015)

Marcus, a 35 year-old engineer, with no application to his current job, saw the MBA as being essential to being able to operate in the future, and decided to pursue an MBA, because

> You need to know your management side to move up in an organization and become ... I mean there are people who have done it without the MBA but I'm saying to function in the world, you need that knowledge, the MBA skills, to be a very good manager, senior manager, CEO, vice president, whatever you become; you need those skills. With an MBA you look at the entire business. You look at marketing, HR, finance, operations, everything that's involved in running a business in the overall aspects. You have an overall view of what it's like running a business. And how everything impacts how the business is run, so that's what motivated me. (Interview, October 30, 2015)

The proliferation of MBAs, their quality and utility, however, has not escaped the business sector. Mr. James, an executive in a business chamber representing businesses in the oil and gas sector, observes that "there's a lot of women who've gone back into education with GATE funding, doing MBAs and that sort of thing" and even among his staff, "who basically have secretarial positions who have completed MBAs. It's a bit of a waste but then they've got the MBA but I don't know if they've got the skills really to be an MBA. It doesn't strike me as that." (Interview, October 28, 2015).

A perspicacious columnist in the Trinidad Express in observing the proliferation of MBA degrees among local graduates, writes

> A few days ago I saw a number of persons graduating with their MBA's. Since the advent of GATE ten years ago there has been a flowering of private tertiary education institutions offering accounting, law and business degrees. As a result of this entrepreneurial zeal it is safe to say that Trinidad and Tobago is now the land of the MBA. Indeed every Tom, Dick and Harry is offering an MBA. In the case of one school in North Trinidad I was told by one educator "MBA sharing like roti". Anyone can be accepted once they have the money, and GATE and by extension the taxpayer does the rest. I, however, question the quality of the offerings in these private schools. I understand that in the case of one MBA, the students do not write exams but do projects for each course. Is this a case of the watering down of the MBA brandy? … What is the consequence of the confluence between the profit motive, the inefficient freeness that is GATE and persons wanting a quickie MBA? The consequence is that we end up as a less competitive and dimmer nation. Thankfully, some enlightened employers know the difference between chalk and cheese (Christo, 2015).

The MBA as Christo (2015) observes has been perceived by graduates to be such a 'signal' to employers, that private institutions are distorting the market by offering MBAs of varying quality, knowing that the market among price averse potential students exists. The proliferation of additional degrees to 'out-degree' one's potential competitors among graduates has become pervasive. "[W]e've fallen in love with qualifications. As distinct from, with learning. We've fallen in love with the fact that people are degreed, as distinct from trained. We've fallen in love with the fact that we've gone to University, as distinct from that we are enabling a self-sustaining economic environment" (Interview with Mr. Jones, November 17, 2015).

Conclusion

This chapter explored the presence of overeducation among higher education graduates in Trinidad and Tobago who benefited from the GATE program, a system of free higher education. In exploring the perception of overeducation among the graduates in the survey sample, it was determined that just about 90 percent of them perceived themselves to be overeducated. This finding must be taken within the context of the employment realities in the country - low unemployment rates and a labor sector dominated by public sector employment and employment opportunities in sectors that require low-skilled and unskilled workers.

The majority of graduates in the sample worked in the public sector, which analysis showed is proliferated with contract and temporary employment opportunities. These positions are inherently largely low skilled and thus the graduates surveyed would think they would be overeducated for these positions. Additionally, the jobs in the traditional public sector are dominated by bureaucratic positions which are largely entry level, at best requiring a high school certificate.

The graduates interviewed for this study brought further nuance to the understanding of the realities of a higher education graduate in the public sector with limited opportunity for advancement in the public sector. It was discovered that overeducation is further facilitated by the eagerness of graduates, with easy access to additional qualifications at relatively low cost, to pursue qualifications they think will act as a ‘signal’ to employers of superior skill and thus greater suitability for the available job, when compared to other graduates in the crowded labor market.

In the following chapter, findings on the complexities and varying perspectives on the intentions of providing free tertiary education.

Chapter 5

Competing and Mismatched: Goals and Intentions of GATE

> I don't think GATE took into consideration the amount of people that would be graduating with degrees and not getting jobs. Yes we have a more educated society, but also a more frustrated society, because it is hard to get a job. (Interview with Ayanna, October 29, 2015)

The above quote characterizes the misalignment of goals for the GATE program among the numerous stakeholders of the program. This chapter presents the multiple conceptions of what the GATE program intended to achieve, its outcomes and what certain stakeholders viewed as its shortcomings. In identifying the goals of GATE, the study explored among interview participants the ways in which they conceptualized the purpose of GATE. The chapter next explores the political reality of the program's continued existence within the context of the local culture, then further delves into the outcomes of the program and the discontinuities which are identified among stakeholders between policy intentions and societal realities.

Up until September 28, 2005, since 2001, the GOTT was funding fifty percent of the tuition expenses of local higher education students attending local institutions. On September 28, 2005, in what is usually the highlight of the parliamentary year, in the Budget Statement the Prime Minister signaled a surprise shift in government education policy.

> Mr. Speaker, at this period in our economic development, there is great demand for well-trained tertiary level graduates. Hence, the establishment and expedition of a National Accreditation System is critical for ensuring that all tertiary level institutions and programmes meet internationally accepted standards. Mr. Speaker, we are well on the way to achieving our goal of a 60 percent participation rate at the tertiary level by 2015…Mr. Speaker, the GATE Programme replaced the Dollar for Dollar Education Plan in September 2004… Since then, our revenue situation has improved considerably. I am therefore pleased to announce, Mr. Speaker, that with effect from January 1, 2006, all nationals of Trinidad and Tobago enrolled at public tertiary institutions, namely UWI, UTT, COSTAATT and other institutions where the Government sponsors students, will be eligible for free tuition, that is free public tertiary education. (Budget Statement 2006, pp. 14-15)

With that statement, "free public tertiary education" was established in Trinidad and Tobago. Interestingly it was couched within the goal of having a 60 percent participation rate in tertiary education by the year 2015. In the 2005 Budget Statement delivered on October 8, 2004, GATE while still being partial funding, and improving tertiary education from 17,000 students to 24,000 students between 2003 and 2004, was identified as being a tool of providing access to "those whose financial situation does not allow them to immediately finance their development themselves" (Budget Statement 2005, p. 18).

In seeking to understand how individual stakeholders conceptualized the goals of GATE, interview participants were each asked the question "What do you think is the goal of GATE?". Among the twenty eight persons interviewed, drawing from graduates, the business sector, government officials and tertiary education administrators, consistently the themes of having economic impact, fulfilling the aims of Vision 2020 and increasing the participation rate in tertiary education, were identified (Table 5.1). Of the responses gathered from participants, two themes stand out. It is interesting to note that these two themes identify goal which has either a societal or personal impact. At the societal level, the theme of economic development of the country was highlighted as a fundamental goal of GATE; and on the personal level the theme of increased access/participation in higher education is highlighted.

Table 5.1 Interview participants understanding of the goals of GATE

Interview Participant	**Classification**	• **Description**
Marvin	Graduate	• Develop knowledge-based society • Vision 2020 – developed country • Diversifying the economy
Sheldon	Graduate	• Keep citizens home • Economic development
Shannon	Graduate	• Providing tuition payments
Tasha	Graduate	• Improve level of tertiary education in country
Elijah	Graduate	• Capacity building: build human resources in country • Educate as many people as possible
Keron	Graduate	• Keep students in the country
Marcus	Graduate	• Open up opportunities for persons in lower economic backgrounds • Less crime • Higher human development index for country • Wider knowledge base • Increase competitiveness
Kenwyne	Graduate	• 100% funding of tuition
Kevin	Graduate	• Have a more certified citizen • 100% funding of tuition
Ravi	Graduate	• More competitive educationally in the region
Devon	Graduate	• Access to higher education

		• Remove funding hurdles, make higher education affordable for everyone
Stacy	Graduate	• Creating educated workforce • Increased participation
Brianna	Graduate	• Make higher education affordable
Ayanna	Graduate	• Provide tuition free funding • Move closer to first world/developed status
Karen	Graduate	• Access for everyone to higher education
Mr. Williams	Administrator	• Part of Vision 2020 • Increase tertiary Ed enrollment to 60% • Highly educated population • Propel economic growth
Mr. Davis	Administrator	• Increased participation • Access to tertiary education • Removing financial obstacle
Mrs. Moore	Administrator	• Become developed country • Increased participation rate to 60%
Ms. Persad	Administrator	• Increase enrollment
Ms. Singh	Administrator	• Addressing MDGs • Knowledge driven economy • Remove financial burden
Mr. James	Business	• Increase participation in tertiary education • Tied to Vision 2020
Ms. Joseph	Business	• Education for all • Part of diversification effort • Meet international standards
Mr. Morris	Business	• Remove tuition payments
Mrs. Charles	Government	• Affordability • Increased participation

Mrs. Alexander	Government	• Increased student participation rate
Mrs. John	Government	• Cover tuition costs
Mr. Jones	Government	• Political, social and economic • Positioning of country globally • Tied to Vision 2020 • Increased participation
Ms. Durant	Government	• Increased participation

Source: Interviews, September 30, 2015 to November 18, 2015.

Despite the fact that in the rationale behind the GATE program was set about over ten years ago, in interviewing participants across the various sectors of business, administration, government and graduates themselves, it is interesting to note that most persons identified the goals of the program almost identically to how the original government described the program. This is noteworthy especially when one considers that half of the life of the program was interceded by another political party being in power. In the Trinidad and Tobago context, where policy changes are frequent with government changes, that this program maintained its original identity is remarkable.

The administrators, business persons and government officials were prone to having a more nuanced descriptions of the program's goals. This may be as a result of their closer connection to the politics at the time of the program's genesis. For Mr. Williams, a tertiary education administrator,

> the government at the time had as part of its 2020 Vision [sic] to be increasing the adult population enrolled tertiary education, and they had set a 60 percent target. That 60 percent target was meant to be the catalyst and the driving force towards that was the GATE program that would allow funding to be available equally across the board to everyone. By and large, the push ... I think as part of the 2020 agenda, if you have a highly educated

> population, then when you have a population that will feed all sectors, and that will in turn propel economic growth. (Interview, November 17, 2015)

Many of the descriptions saw an interchange between a “highly educated population” (Interview with Mr. Williams), with “developed country status” (Interview with Mrs. Moore) and “knowledge driven society” (Interview with Mrs. Singh). The understanding was that the end result would have been a more developed country hence the appropriation of terms synonymous with development.

For the graduates on the other hand, there was a focus on issues of access, increased participation and an economy focused on diversification and skills development. For Elijah, GATE provided “access to higher education for people who wouldn't necessarily have that access otherwise… people who could not usually afford… tertiary level education” (Interview, September 30, 2015). Making higher education affordable was a theme in five of the graduates’ description of the government’s intention in establishing the GATE program.

Vision 2020 and its Impact on GATE

Multiple descriptions of the goals of GATE included references to Vision 2020. It is of interest that Vision 2020 was discontinued as a governmental policy in 2010 with a change of government in Trinidad and Tobago. It was replaced with a document known as the “Medium Term Policy Framework 2011-2014” which identified higher education as a pillar upon which the future Trinidad and Tobago economy will be built (Government of Trinidad and Tobago, 2011). However, there were no references to this new policy document in any of the interviews, although the latest iteration of GATE placed increased emphasis on funding Technical and Vocational Education Training (TVET). This is also interesting because this document and the expansion of GATE to include TVET were major issues discussed by the political party in power which had just lost a general elections by three parliamentary seats, just over one month before these interviews were conducted.

While much of the discourse surrounding GATE incorporates references to Vision 2020, an examination of the policy document offers some attention-grabbing findings. While the Vision 2020 document discusses the importance of tertiary education in developing "a highly skilled, well educated people aspiring to a local culture of excellence that is driven by equal access to learning opportunities" (Government of Trinidad and Tobago, 2002; p.19). The publishing of the Vision 2020 policy predated GATE. Further, Vision 2020 differs from GATE in that the Vision 2020 policy document calls for a "needs-based financial support system" (p. 117) for tertiary education - which is not present in GATE.

However, the aspect of GATE which is most synonymous with Vision 2020 is the call for a 60% participation rate in tertiary education – referred to by many interviewees. While using World Economic Forum data to identify the tertiary education rate in Trinidad and Tobago at the time of the policy's launch on November 12, 2002, as being "15%" (Government of Trinidad and Tobago, 2002; p.21), the original Vision 2020 policy had no target rate for 2020, but rather refers to an amorphous "increased participation" in tertiary education. It was not until 2007, in the Vision 2020 Operational Plan 2007-2010, that a target rate of 45% participation rate by 2010 was mentioned (Government of Trinidad and Tobago, 2007). In the lead up to the 2010 general elections in Trinidad and Tobago, with no reference to any methodology or source, then Prime Minister, Mr. Patrick Manning would indicate that the country had surpassed that goal and the new aim was 60% by 2015.

This 60% participation rate was mentioned by several interviewees as they indicated a target for the program. When questioned further, it was the widespread view that this 60% participation rate had been surpassed by 2015. Participants were repeating what they had heard on the political platforms from the then government months earlier.

> Mr. Williams: So they have the direct objective of increasing secondary school, tertiary-level enrollment to 60 percent of the adult population, but then you had the ancillary objectives of using an educated workforce as a base for driving the economic growth rate.
>
> Question: Right, and do you think those goals were achieved?
>
> Mr. Williams: Well, yeah, I think we have crossed 60 percent. I think that is one.
>
> Question: What do you ... before you go on ... a lot of people have told me that we've crossed the 60 percent. On what basis are you making that statement?
>
> Mr. Williams: Making it because I have no data. I just saying based on what the politicians have said. So based on what they said, the first ... because there's no national enrollment statistics from anyone. (Interview, November 17, 2015)

While having an administrator making such a statement with nothing more than the word of a politician to go by, it was also echoed by two of the other administrators. Mrs. Moore stated that “it was with the intent of achieving the 60% participation rate in tertiary education…[w]e have exceeded it. We are at 65% participation rate” (Interview, October 29, 2015).

The origin of this 65% participation rate can be traced however to a contribution made in in the Senate of Trinidad and Tobago on June 10, 2015, by the Minister with responsibility for tertiary education who stated, “we met it at 42 per cent [in 2010]. It had tapered off when we came into Government, for two years it had tapered off. We took it from 42 per cent to 65.23 per cent” (Parliament of Trinidad and Tobago, 2015; pp. 124-125). One would expect that the calculation of the participation rate would have included Mrs. Charles and Mrs. Alexander, two of the main technocrats overseeing the day to day operations of the GATE program, however they were none the wiser.

> Question: What would you say is the current participation rate?
>
> Mrs. Alexander: I would hazard a guess and say probably about 67 now.
>
> Mrs. Charles: The minister uses 67, the ex-minister, he was using 67%.
>
> Question: I just wanted to compare.
>
> Mrs. Alexander: Simply because the 62.5 is really a measure of the tertiary participation and it hasn't included the tech-voc. So when we include that figure, sometimes ...
>
> Mrs. Charles: No, but he wanted ... When he uses the 67, he was also saying that if he includes this TVET, he is in the 80s.
>
> Mrs. Alexander: Well I'm not sure about that. [laughter] I would say it would be more 67.
>
> Mrs. Charles: Yeah, yeah, but I think we have to be wary of the figures and how they were calculated. You understand? So let's just say we're at that 60 ...
>
> Mrs. Alexander: 67.
>
> Mrs. Charles: We're good, we're good.
> (Interview, October 27, 2015)

The intent of stating a high participation rate in tertiary education, was undoubtedly to demonstrate the success of the GATE program, which requires significant expenditure annually. Additionally, setting a target of 60% was intended “to be a marker of developed country status” (Interview with Mrs. Moore, October 28, 2015), and moreso to be able to compare Trinidad and Tobago to other countries in the region and wider world. Exceeding the targeted 60% participation rate was a source of pride for one of the GATE administrators, Mrs. Charles, who used the opportunity to state that “[w]e're good, we're good. Comparable would have been Barbados. Barbados was offering free tuition and they quit about 2 years ago. I am not sure what their process was, in terms of how they arranged their funding for students.” (Interview, October 27, 2015). A commentary in the Trinidad Express on October 1, 2014 recognizing the implausibility of a 65% participation rate stated this was “a figure that would be risible were it not so perniciously misleading” (Time to Rein in GATE, 2014).

It is interesting to note that while interviewees in describing the intentions of the GATE program would refer to Education For All, global competitiveness and the International Labor Organization, GATE was never referenced in comparison to any other country’s system of state-sponsored tuition-free tertiary education. While Mrs. Charles did indicate that the country’s participation rate metric may have been comparable to Barbados, when asked if the country modeled its set up of GATE after any other country’s model, she was sure to note that it was all local (Interview, October 27, 2015). Another GATE administrator, Ms. Durant, indicated that no other countries were referenced in setting up the electronic systems and processing methods for GATE because “there was no further system… it's actually one of the first and only e-services that actually functions” (Interview, November 18, 2015). Additionally, no references to other countries operating a system of free tertiary education are to be found in any official discussion of GATE.

Political Realities – "Gimme, gimme" Culture

As with most of the social programs in Trinidad and Tobago, the origin and expansion of GATE has its genesis in buoyant economic times – essentially propelled by politics. A windfall from the high price of natural gas on the world market, precipitated the announcement by the Prime Minister and Minister at the time, Patrick Manning that "our revenue situation has improved considerably…all nationals of Trinidad and Tobago …will be eligible for free tuition, that is free public tertiary education. (Budget Statement 2006, pp. 14-15). Mr. Jones, a minister in the cabinet that made the decision to introduce 100% GATE funding, stated that primarily, "it was, in a way, from a political perspective of enfranchising the party's influence amongst, if you want, a significant segment of the population, who are aspirant in terms of where they wanted to go. That's the first point. I suspect that that might be one of the primary reasons" (Interview, November 17, 2015).

This political motive shrouded in developmental discourse is evidenced not only in GATE, but in the many government 'handouts', such as free pharmaceuticals for lifestyle diseases. This then reinforces the sense of "entitlement and now you're saying "Okay now you can get free education" " (Interview with Mr. Morris, October 26, 2015). "Unfortunately expenditure profiles such as this once started are hard to stop. Especially from a political point of view…it probably achieved all of its political objectives" (Interview with Mr. Jones, November 17, 2015).

During the period of the interviews for this study, a new government had just been elected and the price of the country's major exports, oil and natural gas, were plummeting. Examining areas where expenditure could be reduced, the idea of reducing GATE was floated by the new government and thus I elicited reactions from interviewees on this idea.

This cultural dependence on the government, known in the local parlance as a "gimme gimme attitude", was seen by interview participants to be a major impediment to achieving some form of sustainability in the GATE program. "I suppose the culture of Trinidadians and Tobagonians, we are accustomed with a handout and a lot of subsistence and social welfare programs, so that has to be factored in. So any transfer of partial or full cost to us is going to be something that we would find very burdensome" (Interview with Ms. Persad, October 28, 2015).

> We have now a society that has this expectation. That if I go to university I should get this, regardless of my income level. I should get free education. That has a direct relationship to the kind of people, the culture…Now instead of having inculcated a sense of responsibility both to self as well as to those who come after us, we have inculcated a sense of entitlement. People believing that the country owes this to me. You owe me a tertiary level education for free, and I have no responsibility to those who come after me (Interview with Ms. Singh, October 26, 2015).

The political impetus for the establishment of GATE, further evidenced by the lack of proper planning and foresight, as well as, the dearth of a focus on identifying measurable outcomes, has undergirded the view that free tertiary education has evolved into yet another government handout. Changes in the program have evolved out of political expediency and little intentionality is observed between the program's policies and structures and its outcomes.

The Mandate and its Drawbacks

In questioning GATE administrators on the methods used in determining the success of the program, and whether GATE policy attempted to address some of the shortcomings around the program's outcomes, Mrs. Alexander indicated that they did not track the program's outcomes since "our objective was to increase participation by a certain time at a certain rate. So we developed our policy around that objective" (Interview, October 27, 2015). By any measure, the objective of increased participation in tertiary education has been achieved. More citizens of Trinidad and Tobago have accessed tertiary education at little or no personal monetary cost.

> Everybody's doing tertiary education…Getting jobs after university is like hell. I think that there should be some conversation as to what we actually need. I don't think that all programs should be funded…I think that they should definitely discuss what programs are needed for the country's development. And funding those programs instead of all. (Interview with Karen, October 29, 2015)

Historically, the economy of Trinidad and Tobago has been dependent on the export of a single commodity. For the past fifty years, that commodity has been the production of natural gas and crude oil, cumulatively accounting singlehandedly for around half of the country's GDP. With the previous slump in global energy prices in the early 1980s through the mid-1990's, the government sought to identify sectors in the economy which could possibly serve as areas for economic diversification. Sectors like tourism, agriculture, ship repair, printing and packaging, and other industries in the non-energy sector were identified as areas that would lead this diversification thrust. Economist Indera Sagewan-Alli opines that there has been an "absolute mismatch between education policy and development policy" ("Economist: Brain drain will continue with lack of jobs", 2013), and contrary to the belief that the issue of local unemployment of tertiary education graduates being solely as a result of the global economic climate, “our fundamental weakness [is] in designing development-based policies which can support our proposed competitiveness platforms for engendering growth and employment creation” (“University grads face bleak job market”, 2011).

One of the consistent themes broached by interview participants throughout has been the realization that there seems to be no emphasis on specific programs of study that are tied to the country’s developmental goals. With GATE funding being available for all programs in the public institutions, and pre-approved ones in the for-profit sector, students are at liberty to choose the degree of their liking. The output of graduates is therefore not targeted, and in many cases the labor market in several fields is oversaturated with graduates of varying quality. The need for the closer alignment of approved programs of study to developmental goals has been a common observation among those interviewed. There was a “whole mismatch of what are possible outcomes” (Interview with Mr. Jones, November 17, 2015).

Providing students with appropriate career guidance is necessary in helping them identify those areas in which the job market is already saturated. According to the interviewees, degrees such as law, those related to the petrochemical sector, accounting and business management should be de-emphasized. It is felt that graduates leaving universities with these degrees are finding it difficult to secure jobs in these occupations and are inevitably forced into jobs for which they are overeducated.

The identification of sectors for diversification and providing the necessary capacity to allow for the adequate channeling of students to those areas of study would require a full understanding of not only the human capital needs of the country, but some projection of the country's future labor needs. Not only are graduates needed in the non-energy sectors targeted for diversification, but there are current areas where because of a shortage of locals to fill positions, many skilled workers must be imported. Foreigners are employed to fill critical shortages in occupations such as medical doctors, nurses, computer scientists and engineers, for example. The situation is so dire that "in the public healthcare system you'll see it is dominated by Nigerian doctors, by Cuban doctors. If you look at the nursing cadre, you will see it is dominated by nurses from the Far East" (Interview with Ms. Karen, October 26, 2015). It is indeed paradoxical that Trinidad and Tobago has to import skilled workers in areas funded by GATE subsidy, more than ten years after the program was instituted.

Not only was there little targeting of the approved programs of study with the development needs of the country, but with the focus on enrolment, physical expansion of institutions were also not tied to any scientific logic. Ms. Singh, indicated that despite the proliferation of attorneys in the country, the decision was taken to create a TTD$1 billion new campus for the University of the West Indies in southern Trinidad, dedicated to an expanded law faculty. "Do we have a shortage of lawyers?" (Interview, October 26, 2015). Despite the shortage of local medical doctors and other medical personnel, the former government also constructed "a children's hospital [that remains unopened because it] is not staffed, [there's] a need for twenty-five hundred medical professionals, most of those, doctors and nurses", to make the hospital operational (Interview with Marcus, October 30, 2015).

Apart from not syncing the developmental goals of the country and tying university expansion to the programs of study being offered, the business sector representatives interviewed highlighted a mismatch between the type of skills needed by employers and the skills graduates leave the university with. Business chamber executive Mr. James observes that "what we are seeing is people who believed that they have the skills they need to get the jobs and then when it comes they actually don't have the skills and that leads to frustration in lots of people" (Interview, October 28, 2015). Students are graduating with degrees not work ready.

This lack of work readiness manifests itself in myriad forms. Firstly, one of the deficiencies identified as lacking among graduates is the lack of fundamental soft skills such as basic work ethics, presentation skills and report writing. Not only was this identified by each of the business executives interviewed for the study, but it was also highlighted by one of the graduates, Marvin, who is employed by the government on contract to provide training to OJT recruits in these soft skills. According to Marvin, graduates find themselves on the job market with multiple university degrees yet lacking basic life and social skills (Interview, October 29, 2015). Graduates believe that a university credential is all that is required to obtain a job. Even graduates of the TVET institutions, who may be technically sound, when they are placed in the technical environments for which they are trained, lack the report writing and related skills to be efficient on the job.

The mismatch between what employers need and the output from local institutions also is observed in the marketplace, when one examines the theoretical and practical preparation of graduates. The University of the West Indies (UWI), prides itself as the premier tertiary education institution, not only because of its size relative to the other schools, but also because of its history. However, by sheer dint of its size and its inability to quickly adapt to the needs of the contemporary labor market, in areas where it claims to be specialists in such as geology and petroleum engineering, students go into the labor market with a full grasp of the applicable theories, but being at a significant disadvantage because their studies have never transcended the classroom and given them the experience of working with the tools of their trade.

Graduate interviewee, Devon, an engineer by qualification, describes practical facets of his field being "glazed over… at the university, and it wasn't exactly how it was in the real world" (Interview, October 30, 2015). He compares his UWI degree with that offered in the same field at the University of Trinidad and Tobago, a smaller institution in existence for only twelve years, where the degree is more "work-friendly in terms of the tools they equip you with…the programs you learn and the course structure is more relevant to industry and what it's like working". Ms. Persad, an administrator at the UWI, acknowledges that "UWI tends to want to produce more theoretically applied graduates rather than move into the applied graduates that we need in the workplace now" (Interview, October 28, 2015). She further indicated that this was one of the major findings of employer surveys conducted by the university previously.

While because of its size and traditional structure, UWI is slow to adapt to the market needs, administrators interviewed from the small, for-profit institutions, saw the practical nature of their programs as being their strongest selling point. Mr. Davis, an administrator at one of these small institutions referred to this model of adapting to the practical needs of the labor market as “academic vocational. You're getting the hands-on but you're also getting enough of the cherry that allows you to eventually get the degree” (Interview, October 27, 2015). For him, the focus only on theory by the larger ‘players’ in the market, is “the dearth of the education in Trinidad [in] that it has focused for too long on the “know what”. A lot of people they know a lot of things, and you ask them to do it and they can't implement”. Mr. Williams, overseeing a small, for-profit school preparing graduates specifically for the energy sector insists that maintaining a focus on practical skills is the only means by which his school’s graduates will continue to be sought after by the major players in the industry.

Graduates interviewed also recognized the importance of practical experience being part of their degrees. Particularly, the two graduates from COSTATT, Stacy and Karen, identified the practical experience their community college experience afforded them. Karen, who went on to attend UWI for both a Bachelor’s and a Master’s degree, saw the value of the practical experience her degree from COSTATT gave her even though it was not recognized by UWI. Stacy, noted that her COSTAATT degree allowed her to do more practical work than she would have experienced had she chosen to attend UWI instead.

While the business sector may identify this mismatch as being solely the fault of the graduating institutions, the blame can equally be shared by the businesses who don’t always believe that they have some role to play in supplementing each graduate’s educational experiences with additional training. It cannot be expected that a new employee will always come to the job with all the skills required, without any additional contribution from the employer. The finger being pointed at the tertiary education providers by businesses, can likewise be pointed at themselves. The ability to provide the necessary training to new employees by the business sector that is “sufficiently well structured…[requires] a more structured approach to the business of business” (Interview with Mr. Jones, November 17, 2015). Just as graduates are looking for a ready-made job, businesses are looking for a ready-made employee, neither wanting to extend themselves.

Conclusion

This chapter explored the competing conceptualizations of the GATE program among different sectors of the society. The unplanned introduction of free tertiary education was buttressed by increased revenue and coincided with the country’s policy adventure of aiming to become a developed country by the year 2020. The provision of free tertiary education was thus intertwined with Vision 2020 and thus those interviewed as part of the study understood the aims of the program utilizing the political rhetoric used to sell the program to citizens. GATE thus evolved into another government handout, wherein the political intentions superseded any other purpose.

Lack of proper planning in the implementation of the program resulted in a mismatch between the programs outcomes and what was required based on economic realities. This misalignment only served to further frustrate the graduates. Everyone was left pointing fingers at each other, looking for a scapegoat to explain how after over ten years, the society seems to be at the very place it started.

Chapter 6

The Boom in Higher Education. Who Benefited?

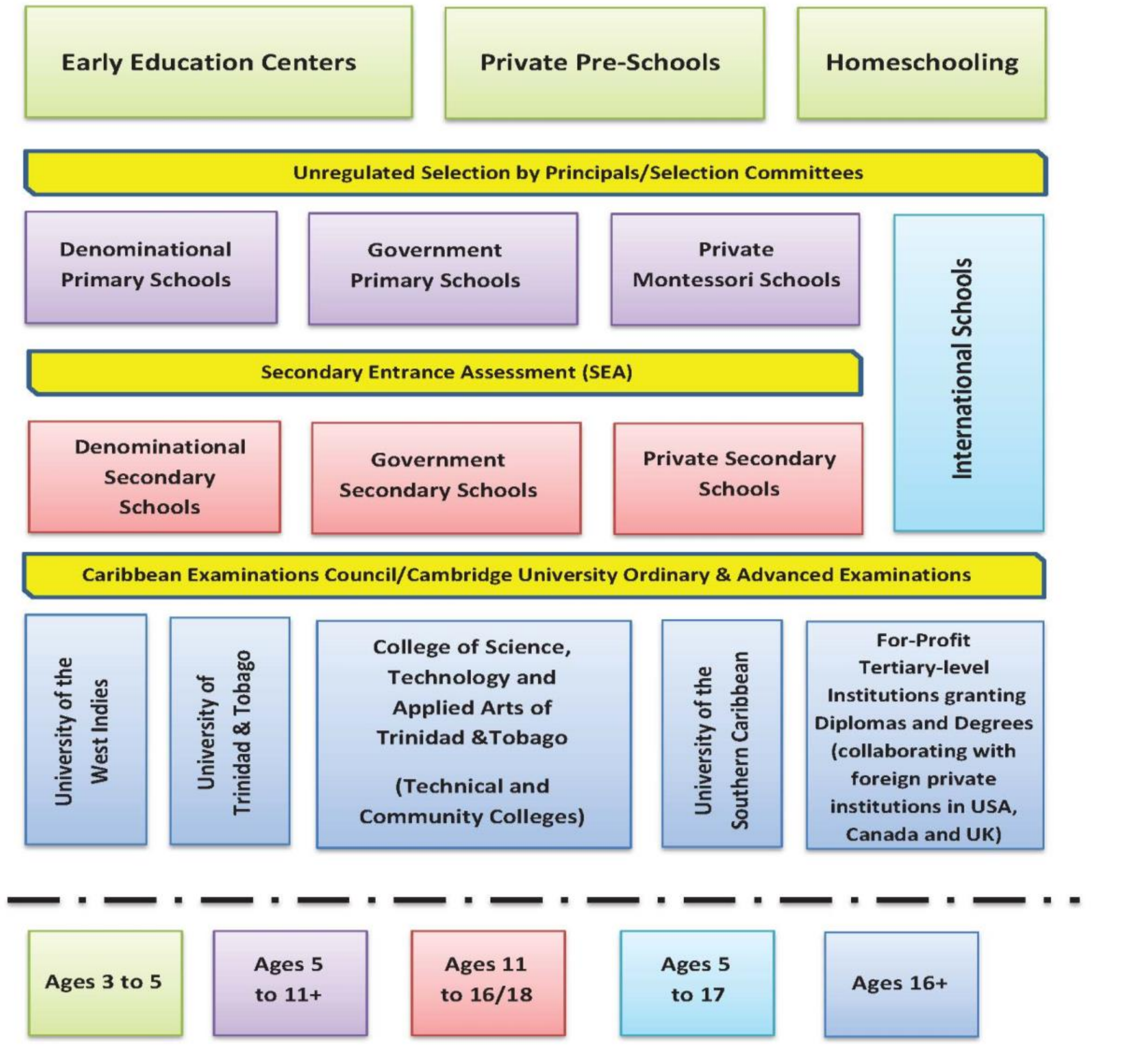
This chapter explores not only the impact increased funding has had on the higher education sector in Trinidad and Tobago, but also examines who and what were the beneficiaries of this movement towards massification of the sector. To adequately treat with the myriad issues at play, this chapter recognizes that while the different stages of education are often discernable by fixed boundaries, education is indeed a continuum and in order to understand the many issues affecting higher education, one must at minimum begin with the previous stage in the structure – secondary schools. After dealing with matters of access, this chapter then examines the impact GATE has had on not only spending in the sector, but also on levels of enrolment and expansion. Issues of quality and accreditation are also problematized within the Trinidad and Tobago context. Next the issue of accreditation of local institutions is reviewed, paying attention to the impact accreditation has on quality. Finally, this chapter concludes with an analysis of the administration of the GATE program and the concerns which arise as a threat to the program's sustainability.

Structure of Education System

In seeking to understand the channeling of students to the higher education sector in Trinidad and Tobago, it is critical that one grasps the structure of the country's education system (Figure 6.1). A former British colony, one of the colonial educational legacies which persists is the bifurcated system of government and denominational schools. Whether the school is government operated or controlled by a denominational board, all school construction and maintenance costs, and salary payments at the primary and secondary levels for teachers and ancillary staff, are met by the government.

While following national education policy, denominational schools are administratively supervised by their corresponding religious boards. Their principals have greater administrative autonomy to determine the operations of their schools and are given individual flexibility to select teachers. Avoiding the bureaucratic delays that characterize seeking a teaching position in government schools via the statutory Teaching Service Commission (TSC), denominational schools exercise great selectivity in screening and hiring the most qualified teachers for their schools. These teachers can then be reassigned and disciplined with relative ease by the denominational principal. On the other hand, government schools are assigned teachers by the TSC, and it is a bureaucratic nightmare to get an underperforming teacher removed or disciplined in a government school.

Figure 6.1 Structure of education system in Trinidad and Tobago



Source: Streete (2012).

The relative autonomy enjoyed by denominational schools translates into better performance of its students at national tests, and results in them being considered the 'prestige schools' in the system, thus ranking as the top schools of choice each year when primary school students participate in the national secondary school entrance exam.

Denominational schools invariably get the top performing primary school students. In addition to high academic standards, these denominational secondary schools are known to have comparatively less violence. Government schools are often characterized by increased school violence, high teacher absenteeism and lower performance at national secondary school examinations (Williams, 2012). Williams (2012) goes on to observe that government secondary schools are further divided between those with an academic focus, that attract the students from primary schools who perform well at the entrance examinations but did not score well enough for the denominational secondary schools; and those with a technical/vocational focus to which low performing students at the entrance examinations are assigned.

From the above structure (Figure 6.1), it is clear to see that, on average, a student's trajectory towards post-secondary education is practically set from the day assignment to a secondary school is made with release of the secondary entrance examination (SEA) results. There are three types of qualifications a student can attain at secondary school. Students can write the Caribbean Secondary Education Certificate (CSEC) examinations, focusing on academic subject areas, usually after five years of secondary school. Students at those schools offering vocational subjects can write Caribbean Vocational Qualification (CVQ) examinations after five years as well, to gain certifications in specialized vocational subjects such as plumbing, masonry, woodworking and welding, for example. However, dropout from secondary schools is very high. "Some 5,000 students out of 17,000 students writing the SEA each year do not make it to the CSEC level" (Ryan, 2013; p. 56). These dropouts are thus automatically out of the running to enjoy the benefit of the GATE program, via the traditional route. There have however been instances where private TLIs with lax entrance requirements accept students without a full CXC certificate, merely to boost enrolment numbers and receive the GATE funding for that student as long as interest in the program is maintained and the student continues to show up for classes.

The system further screens students who write CSEC examinations, with the top performers gaining a minimum of five passes in academic subjects (a ‘full certificate’) having access to a further two years of secondary school to complete the specialized Caribbean Advanced Proficiency Examinations (CAPE). It should be noted that the minimum entrance requirements for admission to UWI is attainment of CAPE qualifications. CAPE thus acts as a gatekeeping examination for access to the premier tertiary education institution in the country – UWI. A full certificate at the CSEC level gains students admission to the other tertiary education institutions, without need for remedial education. In 2013, only 56.2 percent of students writing the CSEC exams received a full certificate, and only 57% received a passing grade in Mathematics (Parliament of the Republic of Trinidad and Tobago, 2014).

A passing CSEC grade in Mathematics and English, along with a full certificate, is the minimum requirement for a job in the public service. The top CAPE performers island-wide have additional access to over 400 academic scholarships awarded yearly on a competitive, meritocratic basis. These scholarships allow the top performers in each category the ability to receive full funding of tuition and expenses at any university in the world to which they gain admission (Open Scholarships). The other national scholarship winners receive Additional Scholarships which entitle them to receive a monthly stipend for the duration of their local undergraduate university attendance.

Students with incomplete CSEC certificates can gain admission to the local public community college, which sees this population as the clientele the college was established to serve. The typical student at that institution is product of a government secondary school who has not made it to the CAPE level. Because the Associate's degree being offered by the community not recognized by UWI, and communicated by for-profit institutions as being sub-par, the administrator, Mrs. Moore in explaining that she continually has to justify why her students deserve not just GATE funding, but additional institutional and state help, sees the government as having the choice of either spending the money in education for her students or in the additional costs to combat crime (Interview with Mrs. Moore, October 29, 2015) .

Cumulative Government Spending on GATE

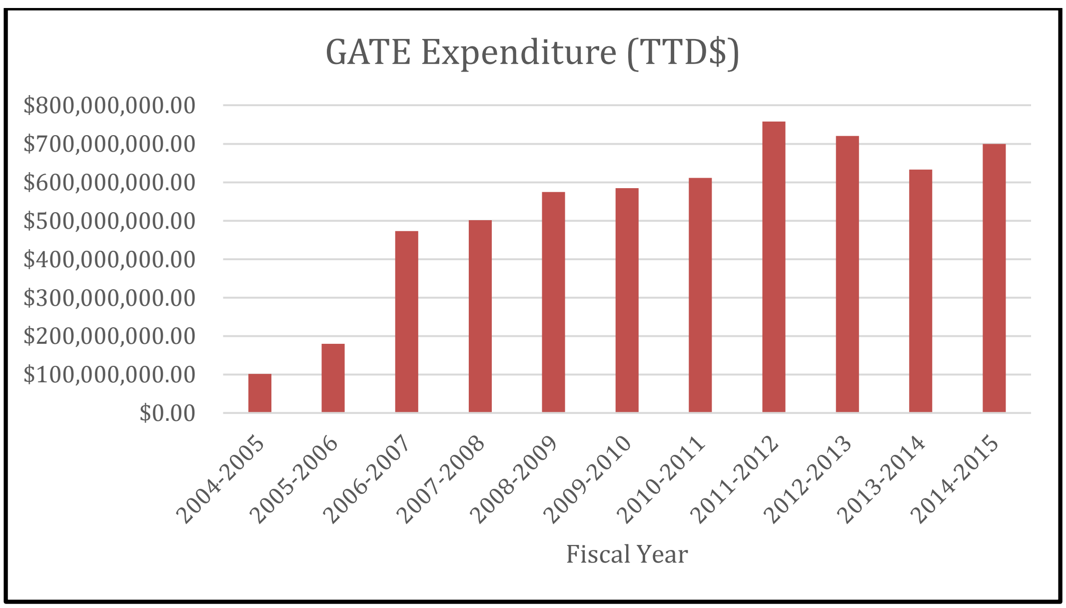
As can be expected, the cost of providing full tuition for undergraduate and TVET students in Trinidad and Tobago, and 50% of graduate tuition costs, is exorbitant. From the advent of the program in the 2004/2005 fiscal year through the 2014/2015 fiscal year, GOTT expended TTD$5,838,279,657.32[3] (Figure 6.2). Mrs. Charles indicated that in determining a student's "Period of Obligatory Service" to accept employment within Trinidad and Tobago (see Appendix D), the total cost of most students' GATE award falls under the TTD$100,000.00 band, and thus their period of service is only one year. Medical students however significantly exceed this amount, and depending on the amount of

[3] USD equivalent = $926,711,056.72 at a foreign exchange rate of USD$1.00 = TT$6.30

specialist training each student receives, this figure can exceed the upper limit, especially if their training occurs outside of Trinidad and Tobago (Interview, October 27, 2015).

An examination of Figure 6.2 shows the payments transferred to TLIs by GOTT during each financial year. The nominal decrease in expenditure after the 2011-2012 Financial Year should not be seen as GOTT accruing any savings from the program, since there is usually a lag in payment to institutions of all types. At the time of my interview with the chief executive of one of the larger private TLIs in October, there were complaints of not having received payments for enrolments which occurred in January. This payment would have occurred been due in the previous financial year and thus would not have been reflected in the payments for that year. GATE expenditure as appears in the reports provided by the GATE Administrative Unit, thus simply reflect when payments are made and not the actual liability of the government for students enrolled in that year.

Figure 6.2 GATE Expenditure per Fiscal Year 2004-2015



Source: Ministry of Education, Tertiary Education Division, Funding and Grants Administration Division. November, 2015.

Higher Education as a business

Tilak (2008) postulates that higher education in addition to being a public good, can also be classified as a commodity insofar as it can be traded (imported and exported). This is present in Trinidad and Tobago among for-profit institutions which franchise all their degrees from foreign universities in the United Kingdom, Canada and Australia, among other British Commonwealth countries. Not only does these for-profit institutions heavily advertise and market these foreign programs to local students and receive payments from the government based on the number of students enrolled, but they are also engaged in transmitting foreign exchange back to the origin countries to cover the fees associated in licensing these programs. GATE pays these for-profit institutions a negotiated rate for tuition. However, it should be noted while the GOTT signs MOUs with these institutions for two years at a time, for-profit institutions have not received an increase in the negotiated tuition flat fee since the 2007-2009 MOU (Mrs. Charles, October 27, 2015).

To account for the gap in tuition fees received from GATE, the rising costs as these institutions begin to introduce new programs and simply from the natural yearly increase of licensing fees due to the ‘sending’ foreign institutions, “to stay competitive [they]… had to add more non-tuition fees, like administrative fees… Some of it is covering tuition costs now, but some of it is also to help us with the services like security, gate processing, health and safety, and all these things.” (Mr. Davis, October 27, 2015). Administrative fees are not regulated by GATE, and students are responsible for paying these costs directly to the institution. Graduates interviewed who attended for-profit institutions, acknowledge the rise in these ‘administrative fees’ each semester, which is further compounded by the fact that the schools charge these fees in foreign currencies. Marvin indicated that “[f]or the Master’s … I had to pay British fees…the fee was at a reasonable price when we did our undergrad and the fees jumped. When I did my Master’s, well Master’s would have been more but the fee did increase, there was some increase in fees” (Interview, October 29, 2015). Public institutions, because their tuition rates are set as per government policy, are not limited in the amount of tuition and administrative fees charged.

Since GATE only funds 50% of graduate tuition, for students pursuing Master’s degrees at for-profit institutions, significant sacrifice must be made to pay these tuition fees, in addition to the school’s ‘administrative fees’. These fees are not regulated and market forces ultimately decide the ‘profit’ institutions can receive for the programs being offered. “The other schools, the bigger ones would increase their fees, but I think a lot of the other schools may not because they may then use it as marketing. “You can come to us because we are cheaper”” (Interview with Mr. Davis, October 27, 2015). According to Ms. Singh, it became a “numbers game”. Referencing for-profit institutions, she says, “they get GATE. They're able to run full page advertisements, advertising for enrollment because it's simply about them bringing in. Because the larger number that they get enrolled is a larger amount of money that government will pay to them based on the numbers. Another numbers game…”.

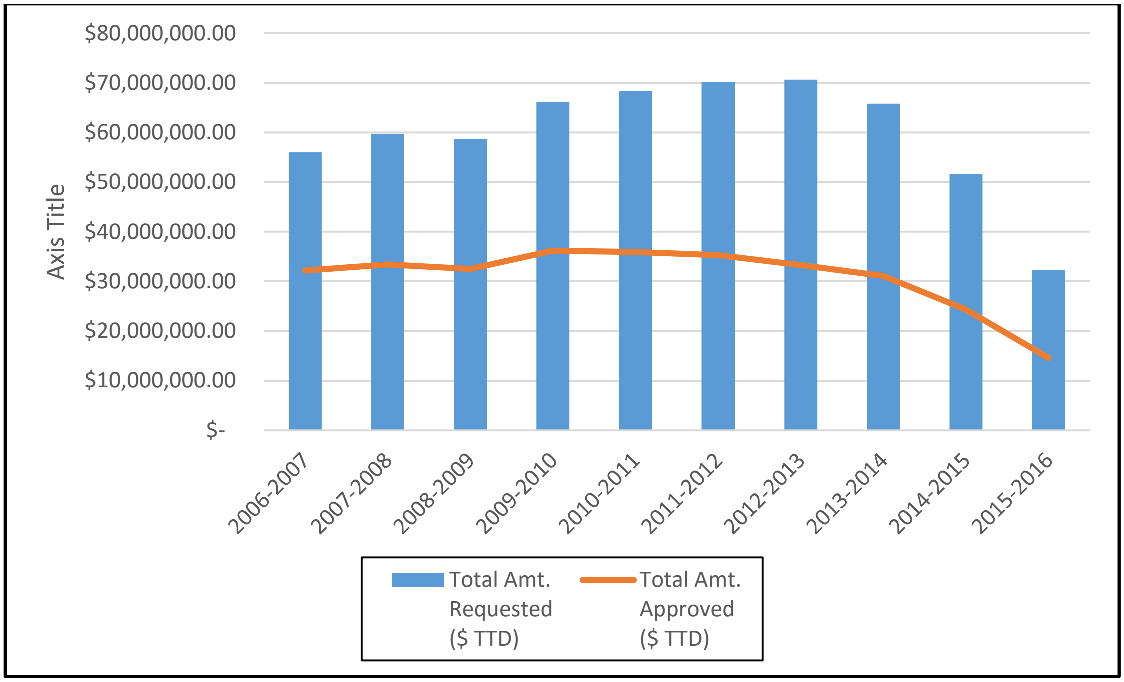
Educational institutions are not the only institutions to benefit from the largesse spent by the government on tertiary education through the GATE program. To offer assistance to students to meet the cost of administrative fees, books, accommodation and tuition fees in the case of graduate degrees, the government has a student loan program – the

Higher Education Loan Program (HELP). Disbursements to students studying in Trinidad and Tobago are capped at TTD$25,000. per academic year and TTD$100,000. per academic year for students studying in the region. To apply for a HELP loan, the only prerequisite is that the student be a recipient of GATE funding. Following approval by the HELP Committee, students then are required to take their approval to one of the four major commercial banks in the country, who will issue the government-guaranteed loan to the student based on the student's credit-worthiness (Interview with Mrs. John, November 18, 2015).

Students who are employed while attending school are required to start repayment of their HELP loan immediately, whereas those full-time students will have their repayments begin after graduation. With a fixed 4% interest rate, the government makes interest loan payments to the bank until the student begins to repay. Banks thus also benefit from government spending in the higher education space. For the ten years that HELP has been in existence, GOTT has guaranteed TTD$308,852,474.40[4] in loans for GATE-funded students (Figure 6.3). It should be noted that as opposed to determining loan amount by demonstrated financial need of the student, HELP approval on the administrative end is determined by whether the student is in a GATE funded program or not, and the cap for HELP assistance based on location of the student's GATE-funded program. The actual determination of the amount to be loaned is made by the banking institution based on the creditworthiness of the student.

[4] USD equivalent = $49,024,202.29; Foreign exchange rate USD$1.00 = TT$6.30.

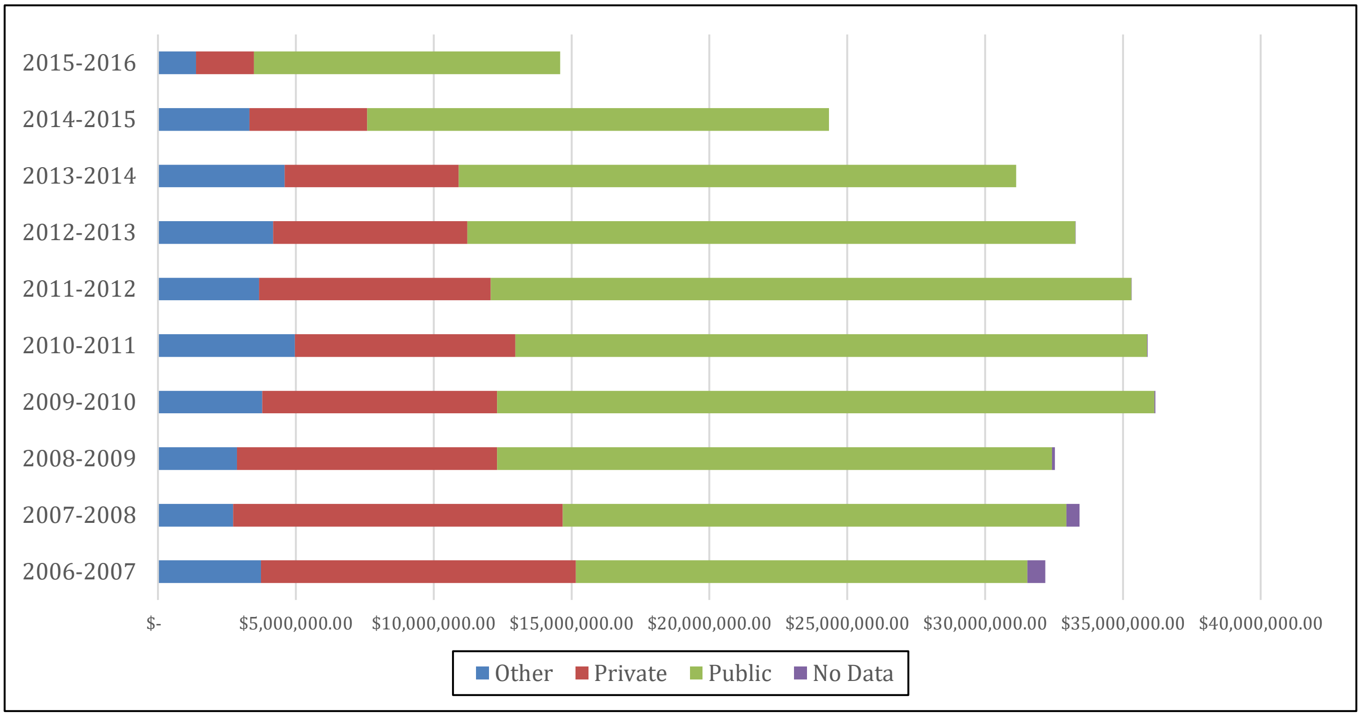
Figure 6.3 HELP disbursements 2006-2016.



Source: Ministry of Education, Tertiary Education Division, Funding and Grants Administration Division. November, 2015.

Despite private institutions being comparatively more expensive to attend, it is instructive that disbursements for loans to students attending public institutions are highest (Figure 6.4). One graduate interviewed believed that this could be explained by the fact that the commercial banks view more favorably students who are enrolled in public institutions, particularly UWI since it is believed that these students are more likely to be employable upon degree completion (Interview with Elijah, September 30, 2015). It is instructive to note that should banks be using the perceived quality of the program as a means of determining loan approval, they are in fact using an element of screening based on a perception of what degrees and institutions are more likely to be of worth in the labor market.

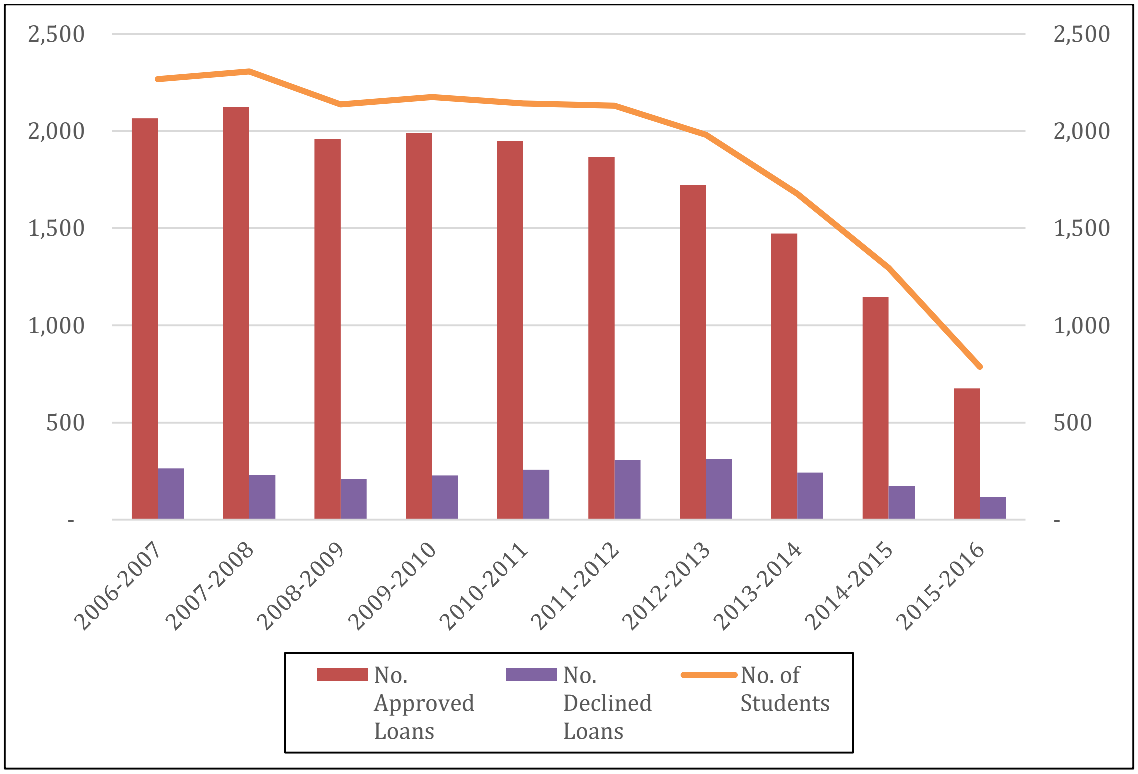
Figure 6.4 HELP Disbursements by Institution Type



Source: Ministry of Education, Tertiary Education Division, Funding and Grants Administration Division. November, 2015.

Demand for the HELP program remains low despite several interviewees, particularly those who enrolled in private TLIs, indicating that the rising cost of registration, administrative and examination fees often to be made payable to the institution in foreign currency. With little advertising done of the program, compared to the number of students accessing GATE annually, requests for HELP assistance remain relatively low (Figure 6.5). It would have been expected that HELP would have been a source of supplementary funding particularly for those who despite tuition being fully paid by GOTT, still raised the cost of attendance as a barrier to their enrolment in a postsecondary education program. Figure 6.5 shows clearly the decline over time in the number of students accessing the loan fund, as well as a decline in the actual number of loans being approved.

Figure 6.5 HELP loans approved and denied 2006 – 2015



Source: Ministry of Education, Tertiary Education Division, Funding and Grants Administration Division. November, 2015.

Accreditation, Quality and Expansion in the GATE Program

The Accreditation Council of Trinidad and Tobago was established by law in 2004, and was operationalized in late 2005. Prior to ACTT, there was no oversight over who established a tertiary education institution.

> Before the Accreditation Council, a man could set up four sheets of galvanize[5], and offer a program and charge people. Then you could then

[5] Roofing material made of aluminum

> come back the next weekend, the four sheets of galvanize gone, and the man gone, the money gone, you ain't getting no certificate. But the fact is, the Accreditation Council has made anybody who wishes to invest and undertake the process needed to deliver quality education has made them recognize there's some work to be done. (Interview with Mr. Williams, November 17, 2015)

ACTT is critical to the operation of GATE, in that, in order to be begin tertiary education services to the public, the institution must be registered with ACTT. For the purposes of GATE, in order to offer GATE-funded programs, institutions must at minimum be registered with ACTT. Registration which is mandatory, "signifies that [an] institution has met the requirements for the delivery of postsecondary or tertiary education in Trinidad and Tobago" Accreditation entails a more rigorous process and entails an evaluation of "educational quality…academic quality,…accountability and…continuous improvement" (ACTT's Fact Sheet, 2016). ACTT is regionally and internationally affiliated with 16 bodies. As of January 8, 2016, ACTT has accredited 11 local institutions and registered 48 institutions with 6 institutions awaiting continuing registration.

Despite this process of accreditation and registration, most private institutions go the route of mere registration with ACTT – a lower quality threshold compared to accreditation. Interview participants linked program quality with this process of registration by private institutions, especially in light of some of the program requirements of the programs being offered by these institutions. Business chamber executive, Ms. Joseph, observes that

> even though the institution has to go through the accreditation board…I'm not convinced about the rigor that they go through for some of these degrees such as you see advertised. Get a Master's, attend 10 classes only on a Saturday. In one year you could have a Master's degree, with a kind of thing like that. I'm not satisfied that the rigor is there. Therefore I think some institutions are getting it, are getting them funded. Of course, there's always the whole thing of corruption. People open up institutions that are not necessarily passionate about education. They see it strictly as a business…on getting the funding. (Interview, October 26, 2015)

Not only does she think the approach of offering these questionable foreign degrees as merely about making money from the government, but she raises the question of corruption that is anecdotally rampant in public institutions. She further states that more oversight and higher standards are required to ensure that the quality of these programs is ascertained in areas of quality and faculty qualifications.

It is interesting to note that being in possession of only local registration, when program quality was raised with administrators and graduates of private institutions, reference is never made to the institution's ACTT registration. Instead reference was always made to the fact that the degree awarded is in the name of the foreign institution, which is "internationally recognized" and "accredited". Tasha, the recipient of an MBA after only having a CSEC certificate and a diploma completion from another foreign institution, indicates that her MBA is of high quality because it is awarded by the Australian Institute of Business, which she has never visited, but "many people also have this MBA".

With there being intense competition for potential students and the GATE funds they bring to the institution, Mrs. Moore of the public community college objects to the very fact that she doesn't "know anywhere ...in the world where public funds are diverted away from public institutions to private for-profit institutions who are by and large administering franchise programs that facilitate an outflow of foreign exchange back to the Metropole, absent two things not just accreditation but clear indications from the labor market that they are fulfilling a clear a training need that the government requires". These institutions are in the market for the same students her institution is trying to attract.

When deciding to implement full funding of tuition via GATE, the government did not first ensure that there was the physical and human capital capacity to absorb the sudden explosion in the number of persons seeking a tertiary education. This inadequate capacity in the established institutions not only placed severe pressure on finding space, but also affected the quality of program being offered, when higher education instantly became a "numbers game". Given the choice of additional funds at the cost of diminished quality, most institutions chose the additional funds.

The COSTATT administrator talks about having to host classes in the evening at local high schools to supplement the cramped space the community college was being forced to operate with. Additionally, with 200 faculty members, the most of them being adjuncts, Mrs. Moore tells of the immense pressure on the administration to maintain classes throughout the country. Faculty shortage means that a nursing program in Tobago, a separate island, requires that faculty leave Trinidad and fly to Tobago regularly to cover classes, and the costs associated in maintaining such a situation. Stacy, a graduate of the community college, shares the experience of the school "running out of space. There were so many cancelled classes. At COSTATT, my second year, classes had to be cancelled because they had all the student in place and they had no rooms available, and then they had no lecturers. So they were having the students, but they were running out of space" (Interview, October 30, 2015).

Ms. Singh, who also taught at UWI, in drawing the link between the rapid expansion in enrolment and diminishing quality, detailed:

> I think we were somewhere in the vicinity of three to four thousand in terms of enrollment I think the enrollment today somewhere in the vicinity of over thirty thousand. Yes, that is a significant increase…The larger the number of students I have enrolled is the larger the amount of money I'm going to be getting from government in order to support that. What that resulted in is a whittling down of the quality of the education system. I say that now from the experience because I'm teaching post graduate level, and students

> have an expectation that I must be giving them notes. I must be telling them what will come in the exam. If I'm not giving you notes, they're going to drop out of my class. That is the level of absurdity that is a consequence of GATE, so that you have persons who really shouldn't be in a tertiary level of education being in it. We had now the numbers in a classroom moving from let's say a high level of let's say maybe forty fifty to over three hundred. (interview, October 26, 2015)

Private institutions also faced explosions in their enrolment. Mr. Davis speaks of having currently having 3,000 students enrolled in his multiple campuses, while a couple years ago at the height of GATE's popularity in 2008/2009 having twice the number of students enrolled in the same facilities.

The Administration of GATE and Abuse of the Program

References to the efficiency of the GATE program, was met in most cases by interview participants highlighting the many ways the administration of GATE was not ready to deal with the demand for higher education. The tremendous pressure placed on the staff of just over 60 persons to facilitate the operation of such a mammoth system was evident throughout the interviews. It was only in January 2014 that GATE began to process yearly student processing online. Graduates interviewed spoke of the stress a paper process elicited. Not only was it time consuming to get all the documents to the centralized areas on time, but a paper process also included a high rate of errors being made. Not only were students required to submit their registration on paper, but private institutions were also required to submit their student registers on paper to verify that students who indicated that they were enrolled at the institutions were actually showing up for classes during the mandatory time period.

The pressure to process the paperwork for all these students also meant that there was always a significant lag between student registration and verification, and when private institutions were actually paid what they were owned by the government. The system of student registration, GATE clearance verifying that the student qualifies for GATE funding and institutional verification, despite an electronic system now being in place is still a source of antagonism for the institutions. Private institution administrators interviewed indicated there was no consistency in the processing times. At the time of interviews in October 2015, one institution was still awaiting payments for the January semester.

These inefficiencies also were reflected in overpayments being made to private institutions. In one case in the public domain, the government was seeking to recoup overpayments to a private institution in the amount of $3 million ("Karim Tells of $3 million GATE overpayment", 2013). This overpayment was only discovered in 2013, from an audit of the 2005-2009 period of the program. Additionally, the quantity of money being owed to UWI by the government was only known to the public because of a walkout by UWI faculty protesting outstanding backpay, where it was ventilated that the government was owing UWI over $200 million for outstanding GATE subsidies (Best, 2015).

On the students end, the theme of personal responsibility and inefficient oversight were identified as each interviewee had at least one example of how GATE was being abused by students with little or no consequence, which was only exacerbated by a manual system. In the first years of GATE, stories of students habitually failing and repeating classes were commonplace. There was

> No system put in place to insist and inculcate a sense of responsibility in our young individuals. That "listen if I use up money this, and I fail. I have deprived somebody else…" Any number of students applying got it. Any discipline you applied for, you got it. There was

> no reason for you to even think at that level, but somebody needed to be thinking about it, but nobody was thinking about it.
> (Interview with Ms. Singh, October 26, 2015).

Students admitted to taking advantage of the lax oversight. Elijah stated "I think it's been abused, I have abused it myself…it had no effect on my life other than I'll have to take another semester" (interview, September 30, 2015). Karen talks of registering for a Government class on three occasions and never attending class. She only registered to maintain fulltime status. And at UWI with so many students enrolled, there was little institutional oversight and enforcement. Stacy in discussing her experience at community college, attending with students who had just completed CSEC at 16 or 17 years old, noted the lack of institutional enforcement, in that "no one was paying attention to what these students were doing really, because they were like, I have 20,000 students, give me my money…".

It was only in 2014 with the advent of electronic registration for students, some ten years later, that the government would attempt to crackdown on students repeating and failing classes, and also taking longer than the stipulated time to graduate. With no real responsibility on the part of the student, the graduates mostly spoke of the scenario that arose where 'tertiary education was now… a right and not really as an opportunity" (Elijah). Interviewees identified that this concept that developed of higher education being conceptualized as a right, was exacerbated by the fact that everyone was entitled to access.

At the time the interviews were being conducted in Trinidad, a new government was in power and the price of a barrel of crude oil was below US$40. The country was on edge and talk of a recession was in the air. References to abuse of access were almost always followed with the suggestion that the rich should pay. That would make students appreciate the unique opportunity they were being afforded. Interestingly, nine of the interviewees identified students having a car and/or the difficulty in accessing parking spots on the UWI campus as proxies for students being able to afford to pay for their education. “I go to school with some students who drive Benz and Mercedes and they’re getting GATE. Now, I am not envious of that, but what I'm saying, I do not have a problem, if I was making that kind of money, and you tell me, hear what, your income, your annual income doesn't qualify you for free tertiary education” (Kevin, October 26, 2015). This observance is echoed also by Mr. James who noted “when I go to UWI and you see every driving nice cars. Not a cheap banger, you know. People driving Mercedes, see who's trying to get out of Mercedes. What the hell! There's people getting out of Mercedes and they're getting free education?” (Interview, October 28, 2015). Interviewees were viewing cars and other consumables as uses of disposable income which could otherwise be applied to funding that individual’s education.

Conclusion

The fact remains that over a ten year period, in Trinidad and Tobago there was a huge increase in the number of persons possessing tertiary education degrees, of undetermined quality. With the frustration of overeducation a grim reality, this chapter explored the winners and the losers in a program which spent close to TTD$6 billion dollars. Putting the proverbial cart before the horse, despite the ravings of increased tertiary education participation rates, this chapter shows that this program merely redounded to the benefit of those who would have otherwise been ahead in the society.

The disadvantaged student whose script would have been written from the time he did not perform well at the secondary entrance exam, on average was in no way impacted by the GATE program. The program was fueled by the largesse at play rewarding institutions and individuals for outcomes that were not only poorly defined but prove to be elusive.

Chapter 7

Conclusion

Education has been often touted in the developing world as the panacea to most of the society's issues. Education, however well-intentioned its provision, will not solve problems for which it was not directed. In providing the funding necessary for the provision of free tertiary education, the Government of Trinidad and Tobago thought they had overcame the greatest challenge to creating a viable pathway to developed country status.

If only the painstaking, methodical process the government engaged in to develop the Vision 2020 policy document, was applied to the conceptualization of a system of free higher education, great care would have been taken in creating the 'fertile soil' necessary for this program to have more beneficial outcomes for those who needed it most. The main purpose of this study was to gain an understanding of the many facets of this program and the ways in which various stakeholders experienced and were impacted by the program, thus bringing light to the complexities involved in transforming a society.

In examining the perception of overeducation among the intended beneficiaries of this program, it was discovered that providing society with the tools necessary for advancement will be severely shortchanged if the environment is not first established that will give the recipients every opportunity at success. Diversification of the economy should have been a priority, thus creating avenues for the newly graduated to contribute in creating a revitalized society. The telegraphed intention of creating a developed society by way of a more educated populace should also have been seen as the opportunity to transform the public sector, which is still stuck in its colonial origins.

The will to provide the funding necessary to create an opportunity for the benefit of so many citizens could have gone one step further in creating spaces where all the actors could have collaborated on understanding each other's challenges. Government would have understood the areas in which capacity was lacking. Universities would have recognized their role in creating an employee who would be of benefit to the labor market, and employers have known the innovation necessary to seek out new markets allowing for the absorption of additional workers.

Divorcing the policy of providing free higher education from other aspects of the economy, other levels of education and from within the larger context of the experiences of other societies which have implemented such a program, fails to situate the issues at play within a complex intermingling of various policies and stakeholders. It's never as easy as announcing a policy direction and having it automatically crystallize because significant sums of money have been devoted to it.

Summary of the Study

The purpose of this mixed methods study was to examine the impact of the GATE program on the employment outcomes of higher education graduates in Trinidad and Tobago. Among graduates, there has been an assumption of overeducation. This study also examines the many phases of GATE from 2004 through 2015, because it is anticipated that by understanding the intent and operationalization of the many phases of GATE, not only will clarity in purpose surface, but an examination of the influence on those GATE seeks to impact will offer a way forward in understanding, maximizing and shaping government policy on higher education finance in a developing country. Using a critical policy analysis theoretical perspective, this study also examines the higher education finance policy represented by GATE by ‘giving voice’ to all those constituents who are affected by this policy. The research questions that guided this study were:

1) What is the incidence of overeducation among higher education graduates benefiting from GATE in Trinidad and Tobago? What are the contributing factors of said overeducation?
2) How do graduates and other stakeholders (namely, higher education administrators, policy makers and businesspersons) make sense of the impact a system of free higher education has on the employment outcomes of higher education graduates in Trinidad and Tobago?
3) How do graduates and other stakeholders (namely, higher education administrators, policy makers and businesspersons) conceptualize the need for and efficacy of a system of free higher education in Trinidad and Tobago?

I used a mixed method research design to investigate the incidence and impact of overeducation on the Trinidad and Tobago society. A purposive sampling of post-secondary graduates of the GATE program residing in Trinidad and Tobago yielded a sample of 746 graduates. These graduates responded to an online survey instrument, and 15 of these graduates participated in subsequent semi-structured interviews.

The questionnaire sample consisted of 746 graduates of whom 78.2% were female and 21.8% were male, mirroring the dominance of females in enrolment at higher education institutions in Trinidad and Tobago. This sample represented the racial makeup of the country with 42.5% of the sample identifying as African, 25.9% as East Indian and 29.9% identifying as Mixed. Graduates indicated that at the secondary school level, 50.3% attended government secondary schools and 44% attended denominational secondary schools. The majority of the sample were employed (79.6%) at the time of the survey.

The interview sample of graduates consisted of 10 males and 5 females, with ages ranging from 23 years old to 45 years of age, with a mean age of 31 years. Eight of the interviewees identified as being of African descent, four being East Indian, and the remaining three interview participants being of Mixed race. Ten of the interview sample of graduates attended government-controlled secondary, and five attended a denominational secondary school. Eight were employed in the public sector and seven in the private sector.

Major Findings and Conclusions

This section summarizes the major findings from this study and the conclusions I have drawn from them.

The GATE Program

In existence since 2004, when it funded 50% of undergraduate tuition costs, and expanded in 2006 to provide full funding of tuition costs for undergraduate study and 50% of postgraduate study, the GATE program represents a significant financial investment by the government. For the lifespan of the program, from 2004/2005 Financial Year through the 2014/2015 Financial Year, the Trinidad and Tobago government has expended

TT$5,838,279,657.32 on funding the GATE program. By the 2011/2012 Financial Year, 369,101 persons had been funded by the program. In its present iteration, GATE funds studies at both higher education and TVET institutions in the public and private sector.

Overeducation

Results from the questionnaire sample, using the self report method of the identification of overeducation, indicated that 90.1% of respondents perceived they were overeducated. This is further reflected in the interview sample of graduates, the majority of whom, in describing their educational qualifications and their current job descriptions also demonstrated the high level of overeducation present among graduates who benefited from full funding of their undergraduate degrees by the GATE program.

With the government being the largest employer in Trinidad and Tobago, among the graduates interviewed, it is discovered that for those employed in the public sector much of their overeducation stems from the very structure of the public sector which values seniority, as opposed to making appointments based on the employee's qualifications. This colonial system ensures that many of the recent graduates from the country's TLIs who are employed in the public sector find themselves lumped at the lowest levels of the public service – in positions that require a basic secondary school certificate. This issue is further compounded by the fact that increasingly university graduates are finding it difficult to gain permanent positions at these lower levels of the public service. Graduates are often thus employed on short-term contracts and as part of On The Job Training program. Graduates expressed that this was frustrating not only because they found themselves in jobs for which they are overqualified and for which most of their skills were not being fully utilized, but also because these short term placement arrangements offer little job security.

The dissatisfaction with the jobs available after graduation, and the relative ease at which admission to postgraduate programs especially at private TLIs are made, has resulted in the ‘degree epidemic’. Students are seeking additional degrees, not to equip themselves with further skills for their current jobs, but with the hope that this additional degree, often in an entirely new field will offer them the “right degree” to get a permanent job. This further compounds the overeducation identified throughout the country as these graduates with postgraduate and multiple degrees find themselves in the same labor market with those citizens possessing limited educational experience beyond secondary schooling, for the same entry-level positions.

Motivation is low and frustration is high among these graduates as they participate in the labor market under these conditions. Productivity has become a major issue identified by employers, especially among graduates who are overeducated for the positions they hold. This aligns with the findings in the overeducation literature that establishes a link between overeducation and worker productivity (Tsang and Levin, 1985; Tsang et al., 1991; Rumberger, 1987).

Misalignment of GATE to the Country’s Needs

From its inception, GATE has been promoted by the government as being a means through which not only would the participation rate in higher education in the country will be increased, but also the means by which the country will become a knowledge-based society. These goals of a higher education participation rate of 60% and developing a more educated society, were seen as important precursors to Trinidad and Tobago becoming a developed country. This developed country aspiration was tied to the policy document developed by the government – Vision 2020. Graduates of the GATE program in describing the goals of GATE, also were found to be repeating the government's description of the program's goals and the benefits the country would have gained because of the implementation of the program.

Interviews with university administrators, the business sector and a politician, however indicated that the public government pronouncements of the goals of the program were very different to the how the program was operationalized. For them, GATE was in fact another iteration of the government adding to the myriad social programs being offered to the population as a means of gaining political favor. This political impetus for the program thus ensured that from the onset the program was doomed to failure.

GOTT in establishing this program of expanded access to postsecondary qualifications, failed to create the diversification in the economy that would have resulted in a labor market with additional employment opportunities to absorb the new graduates. Additionally, not only was there a capacity problem in the labor market when the graduates of the GATE program swamped the labor market, but there also was a mismatch between the needs of the private sector and the output of the educational institutions. With no matching of the programs being funded to the labor needs of the country, there persists an oversupply of graduates in certain areas such as accounting and management, and a shortage of graduates in critical areas such as nursing, medical doctors and technical/scientific skills necessary for a robust manufacturing and industrial sector. Additionally, in the face of oversaturation of the labor market, business leaders lamented that GATE failed to promote an entrepreneurial and innovative spirit in its beneficiaries, that may have resulted in the creation of new industries and thus sources of additional employment in the country.

This mismatch between the output of the postsecondary education sector and the needs of the labor market has been further exacerbated by the observation that even with a university degree, employers are discovering that significant time and money still need to be expended to bring these employees to the requisite competencies not only in the technical aspects of the job but also in practical areas such as etiquette, presentation skills and report writing.

The True Beneficiaries of GATE

Removing the financial barriers to obtaining a postsecondary education was seen by GOTT to be critical in increasing access to higher education. While the number of students enrolling at that level of education has unquestionably increased with the implementation of GATE, GATE has done little to address issues of equity in the educational system in Trinidad and Tobago. Admission to postsecondary schooling for officially requires students to possess a secondary school certificate of having passed five subject areas after taking examinations at the CSEC level, usually obtained after five years of secondary school. An analysis however of what persists at the secondary school level of the education system in Trinidad and Tobago, points to high dropout rates at the secondary school level. Approximately 5,000 of the 17,000 students who enter the secondary school system never graduate. This is further compounded by the fact that only around half of the students writing CSEC examinations every year obtain a full certificate of passing five or more subject areas. For most of these students, higher education is not an option. Free higher education financing as embodied in the GATE program thus excludes a significant portion of the population who are not in an academic position to access higher education.

With GATE funding being extended to both public and private institutions, and the consistent identification of issues in the program's administration that allows for significant individual and institutional abuse, the private TLIs have benefited tremendously from GOTT spending on GATE. This is observed in caliber of students these institutions admit and the quality and quantity of the programs being offered by these institutions. Lax admissions practices by private institutions ensure that their involvement in providing higher education is largely a numbers game. The more students they admit, the more these institutions will be paid by GOTT. Additionally, with these institutions only being required to maintain registration and not accreditation with the ACTT, there is little oversight of the quality of programs being offered by these institutions. In addition to tuition fees which are covered in full by the government at the undergraduate level, by offering degrees issued by foreign institutions, private TLIs also impose high administrative fees on students. These fees, usually paid in foreign currency, are paid directly by the students. For these private TLIs, GATE has created an industry which treats higher education as a business and is more concerned with the profits to be derived as long as GATE provides the illusion that higher education is free and is a necessity for employment and personal advancement.

Despite the fact that GOTT, through the GATE program covers the tuition costs of undergraduate study, education at this level is certainly not free. With high administrative and other fees; the need for books, supplies, transportation and in some cases housing, GATE has also created expanded business opportunities for commercial banks who provide government-guaranteed loans to students. This loan program, HELP, has provide business to banks since its inception in 2006 an amount totaling TT$308,852,474.40.

In summary, this study has found that among the study's sample of graduates surveyed, 90 percent considered that they were overeducated. With the government being the largest employer in the country, the major contributing factor to this overeducation is the structure and employment practices of the public sector which is still operating based on its colonial foundations of seniority dictating promotion. The inflexibility of the public bureaucracy to basing appointment on qualifications earned and the possession of job-related skills has all but relegated recent higher education graduates to the bottom rungs of the public service as office clerks or contract employees.

The graduates of the GATE program and other stakeholders have indicated that the lack of foresight in the design of GATE has resulted in an oversupply of graduates in areas for which there is limited need. Further, with little restriction on which institutions qualify for enrolling GATE-funded students, institutions are more concerned with revenue derived for the number of students enrolled in their institution, than are they with the quality of the programs being offered. Coupled with the oversupply of graduates in certain sectors, low-quality programs significantly impact employers in finding employees with the actual skills required to perform at the levels required.

With the collapse of oil and natural gas prices on the world market beginning in 2014, the ability of GOTT to fund GATE at the current levels has been questioned. With GOTT taking austerity measures to avoid an economic crisis, GATE has been identified as one of those areas that are no longer sustainable. Those interviewed as part of this study have advocated that technology can assist with eliminating some of the abuses and inefficiencies which exist in the program. Further, it has been argued that insofar as secondary school completion remains a challenge especially for low SES students, the continued provision of GATE funding to everyone irrespective of parental or individual income, further entrenches the income inequality which persists in the country.

While this study identifies numerous problems which arose as a result of Trinidad and Tobago implementing a system of free higher education, it would be unfair to portray the GATE program as an absolute failure. The fact that at the height of the program's existence in the 2008/2009 fiscal year, GATE was funding higher education for in excess of 100,000 citizens in that period, is commendable. Additionally, as exemplified by Table 4.6, GATE provided opportunity for students, whose parents would not have had the opportunity of going beyond secondary school, to attain a tertiary level education. The observed expansion in the number of institutions particularly in the private sector following the introduction of GATE, points to GATE's role in establishing a thriving higher education industry in the country. This undoubtedly included the creation of additional employment in the sector, and generated several spinoff benefits in the construction of these institutions and the supply of goods and services to them.

Further, it will be difficult to argue that providing someone with additional schooling, whether or not it has been directly related to the job they were able to attain, constitutes a waste of resources. As with the identified shortcomings of the reliance on rates of returns to education being used as the sole determinant of investment decisions in education in the developing world, reducing higher education finance decisions to being solely based on a byproduct of overeducation is similarly shortsighted. The significant investment made in providing higher education would have accrued numerous non-monetary/non-economic benefits. Undoubtedly, Trinidad and Tobago would have benefited in the social realm as a result of its decision to invest in establishing GATE.

Significance of the Study

With the free college movement becoming increasingly louder in the developing world, where higher education is being framed as a fundamental right, this study explores the challenges small economies face when having to balance development aspirations with the many pressing needs in the country. While at the origin of the plan to provide free higher education, the idealist expectation was that everyone would have benefited as there were no stated restrictions to access, in reality, not having addressed systemic inefficiencies and inequalities, made universal access a pipe dream.

This study also echoes Psacharopoulos and Patrinos' (2004) assertion that subsidies at the higher levels of schooling are unsustainable as they eventually are recognized for what they are – supporting the advancement of a few elites who could otherwise have carried the burdens of those costs without the unrequested intervention of the State. Provision of 'free' higher education is thus essentially a tax on the poor, who will on average never have the prerequisites to gain entrance to higher education institutions, to the benefit of the rich.

Further, the literature on overeducation is replete with a macro look at the problems associated with overeducation. This study however, approaches overeducation on a personal level – allowing the voices of those impacted to be heard. The reflections garnered from these stakeholders serve to refine the literature on overeducation, taking into account the psychological, social and cultural factors that are reflected. The literature treats overeducation largely as a statistical calculation of the mismatch between a worker's skill as evidenced by some training or education, and the demands for their current job. This study however shows there is also a psychological dimension which comes into play as increased educational attainment leads to a raised expectation as to the type of job one is equipped to perform. This psychological dimension is further heightened in a scenario where the barrier of tuition cost is removed, as the Trinidad and Tobago case displays.

Recommendations

The findings of this study point to some considerations which may improve the system of higher education finance in Trinidad and Tobago. Improvement in the system is needed not only for sustainability purposes, insofar as the financial pressures brought about by collapsed energy prices worldwide has led to a recession in Trinidad and Tobago; but also to ensure that the output of the system is of value both to the individual needs of graduates but also to the development needs of the country.

Efficient Administration of GATE

In 2016, with the price of a barrel of oil, the country's main export, hovering around an average of USD$30.00, compared to in excess of USD$100.00 per barrel in 2006 when the GATE program was expanded to provide full funding of tuition, GOTT's revenue has decreased dramatically. Subsidies to programs such as GATE have to be re-examined under these conditions. Before addressing whether funding under the GATE program should be eliminated or reduced to match the decrease in government expenditure, great savings can be gained from improving the efficiency of the program. With the implementation of an online registration system for students utilizing GATE funding, this online system should be extended for institutional use. This would allow not only the faster verification of a student's continued enrolment, but also faster verification of students' academic performance. Significant savings can be expected from a system that relies less on paper and for which decisions on verification, and where necessary, a discontinuation of funding can be made in a shorter time frame.

Alignment of Funding to Employment Needs

Much of the frustration experienced by GATE recipients surrounds their inability to find jobs in the areas for which they are qualified. Currently, little forecasting of the country's future labor needs is being conducted. This points to the significant shortcomings of the government and its agencies in producing accurate and timely statistics on educational attainment in the country and the reality of what persists in the labor market. Improving these statistics will allow on one level individuals and institutions to identify those sectors which are projecting growth in the near future and to allow institutions to align the programs being offered to what will be the educational needs of those sectors. Additionally, with some projection as to the employment needs of industries expected to expand in the future, GOTT will then be in a position to target specific programs for full funding to promote institutions offering these programs and also for students having the necessary prerequisites to enter those fields of study.

Re-Examination of the Role of the Private Sector in Higher Education

The private higher education sector has been the overwhelming beneficiaries of the GATE program, insofar as they have been able to reap the reward for minimal investment in the development of programs of study. By franchising foreign degrees, these institutions have little input in the quality of what is being offered. The requirement that GATE funding is dependent only on registration with the relevant accreditation body in the country, the ACTT, and not full accreditation, has allowed these institutions to have slack admissions standards, lecturers of questionable quality and the offering of degrees from foreign institutions that may not be applicable to the local context and realities, nor whose quality is not verified. Every dollar that is funneled to support low-quality foreign degrees offered by these private institutions, is a dollar that may have been better spent to improve the accredited public institutions which are under tremendous strain to provide education in capital-intensive fields such as nursing, medicine and other sciences. The private higher education sector has not been attracted to these needed fields of study because of the significant investments that will be required, ultimately resulting in reduced profits accruing to their business model. Government must thus review the full funding of programs offered by private institutions without them first attaining accreditation by the ACTT on the quality of the programs being offered.

Strengthening of the Community College System

The community college system in Trinidad and Tobago is organized under one institution – COSTAATT. With close to 9,000 students in the 2015/2016 academic year, spread over six campuses throughout the country, COSTAATT plays a vital role in equipping future employees with practical skills. Having to compete with private TLIs with low entry requirements, COSTAATT has been forced to operate in an environment where enrolment numbers drive revenue to be derived from the GATE program. Support for COSTAATT should be driven instead by an understanding of the vital role the institution plays in bridging the gap between secondary schools and universities. With an emphasis on those not in possession of a full CSEC certificate, COSTAATT's college preparation/remediation programs are vital to those students emanating from disadvantaged secondary schools. Additionally, the programs offered by COSTAATT, such as nursing, radiography, medical laboratory technology, graphic design, criminal justice, library studies and occupational safety and health, among others, provide the country with much-needed skilled individuals in some areas for which immigrant workers are still being sourced. A strengthening of GOTT's investment in COSTAATT provides the labor market with employees possessing the practical skills which employers continually clamor for.

Limitations of the Study

This study, while uncovering many nuances in the implementation of a program of free higher education, was limited in that many of the politicians who were responsible for implementing the policy, made themselves unavailable to be interviewed. It would have been ideal to have more of the policymakers included the qualitative aspect of the study, thus allowing for a better tracing of the decision making processes at the time the decision was made to pursue free higher education. Were the motivation purely political? Did the Prime Minister truly believe that the country could be a developed country by 2020? Is a tertiary education participation rate of 60% indeed possible in a single commodity economy such as Trinidad and Tobago? Officials approached to be interviewed were of the opinion that the study's findings would have personally been attributable to their involvement in the program.

Additionally, this study was limited by the fact that only employed graduates were considered in the study. Would unemployed graduates conceptualize the goals and outcomes of the program in the same way? What may they have seen as the barriers to them getting a job? An expansion of the those incorporated in the study may offer alternative viewpoints not incorporated in the study.

The sorry state of access to quality data in Trinidad and Tobago severely hampered what could have otherwise been a more robust study, if more the appropriate survey data on employment trends and educational attainment were available. The fact that essential statistics can go uncollected, raises fundamental questions on the assertion that the tertiary education participation rate is indeed at 65%, and indeed whether the 3.5% unemployment rate is accurate. Again the heavy hand political spin casts a cloud on the post-colonial society.

Agenda for Future Research

The scope of this study was limited to an examination of the impact of free higher education in Trinidad and Tobago, and the overeducation which was identified, and thus the study's findings are limited and certainly not generalizable. As various developing countries toy with the idea of offering free higher education, studying what maintains in those countries currently - prior to implementing free higher education could prove beneficial.

Particularly among the private higher education sector, the motivations for being involved in the sector and what attracts students to those institutions can be explored. Whether or in what ways the landscape then shifts after the implementation of free higher education can then more accurately examine the impact free higher education has had on that sector of the system.

Additionally, the study found that there was a mismatch between the intentions of the program and what different stakeholders saw as the program's output. This mismatch has been identified as the source of a misalignment between the programs of study being pursued by students benefiting from GATE and the skills needed by employers. Further research examining the role of higher education in workforce development in developing countries is thus required. At a fundamental level, conceptualizations of what indeed is free higher education need to be explored. Free college has meant different things to different people, in different contexts. The ways in which these conceptualizations converge and differ is worthy of additional study.

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APPENDIX A: SURVEY PROTOCOL

GATE Study

Q1.1 Before participating in this survey, please read and accept the following terms. Description of the Research: You are invited to participate in a research study on the impact of higher education funding in Trinidad and Tobago. This research is being conducted by Denzil Streete, a PhD candidate at Teachers College, Columbia University (www.tc.edu). Risks and Benefits: The risks in this study are minimal, but present.
You are being asked to share your perspective on higher education finance in Trinidad and Tobago. By consenting you are giving me permission to share your perspective.
There are no direct benefits or financial remuneration for your participation in this study. The possible benefits are indirect benefits from the time and space to reflect on the implications of your higher education experience. How Results Will Be Used: As part of the nature of academic research, the contents of this survey will be analyzed for research purposes and may be used in academic papers, publications, and presentations at conferences. Please note, however, that your name and personal information will never be disclosed. Data Storage: Your responses to this survey will be encrypted and stored electronically. Time Involvement: Your participation will take approximately 10 minutes. The survey is totally confidential and anonymous, unless indicated otherwise. There is no right or wrong answer. Your candor in replying is valuable and appreciated. Thank you in advance for your participation. Teachers College, Columbia University IRB-approved Protocol Number: 15-380

Q1.2 By clicking accept below you are consenting to the above terms. Thank you for your participation.

❍❍ I accept the above terms (1)

❍❍ I DO NOT accept the above terms. Abort this survey. (2)

Answer If By clicking accept below you are consenting to the above terms. Thank you for your participation. I DO NOT accept the above terms. Abort this survey. Is Selected

Q1.3 Thank you for your interest in this survey. Based on your response(s) you do not qualify for participation.

If Thank you for your interest... Is Displayed, Then Skip To End of Survey

Q2.1 Are you currently residing in Trinidad and Tobago?

❍❍ Yes (1)

❍❍ No (2)

Q2.2 Did you use GATE funding to attain a post-secondary qualification?

❍❍ Yes (1)

❍❍ No (2)

Q2.3 Year you first started using GATE funding:

Answer If Did you use GATE funding to attain a post-secondary qualification? No Is Selected Or Are you currently residing in Trinidad and Tobago? No Is Selected
Q2.4 Thank you for your interest in this survey. Based on your response(s) you do not qualify for participation.
If Thank you for your interest... Is Displayed, Then Skip To End of Survey

Q3.1 Sex:
❍❍ Male (1)
❍❍ Female (2)

Q3.2 Age:

Q3.3 To which ethnic group do you belong?
❍❍ African (1)
❍❍ Caucasian (2)
❍❍ Chinese (3)
❍❍ East Indian (4)
❍❍ Indigenous (5)
❍❍ Mixed (African and East Indian) (6)
❍❍ Mixed (Other) (7)
❍❍ Portuguese (8)
❍❍ Syrian/Lebanese (9)
❍❍ Other Ethnic Group (10)

Q3.4 Marital Status:
❍❍ Single (1)
❍❍ Married (2)
❍❍ Divorced (3)
❍❍ Other (4)

Q3.5 Where were you living at the time you first received GATE funding? (Name of town/city)

Q3.6 Where are you currently living?(Name of town/city)

Q3.7 Secondary School you last attended:

Q3.8 Highest level attained in Secondary School?

❍❍ Form 5 (CXC/CSEC) (1)

❍❍ Form 6 (A Levels/CAPE) (2)

❍❍ Other (3) ____________________

Q3.9 Institution(s) Attended with GATE funding?

❑❑ UWI St. Augustine (1)

❑❑ UWI Mona (2)

❑❑ UWI Cave Hill (3)

❑❑ University of Trinidad and Tobago (provide name of campus) (4)

____

❑❑ COSTAATT (provide name of campus) (5) ____________________

❑❑ Other (6) ____________________

Q3.10 Your mother's highest education attained?

❍❍ Some Secondary School or less (1)

❍❍ Secondary School (2)

❍❍ Some University (3)

❍❍ Bachelors or equivalent

(4) ❍❍ Masters or equivalent

(5) ❍❍ Vocational (6)

❍❍ Professional Degree (MD, JD, etc.) (7)

❍❍ PhD or equivalent (8)

Q3.11 Your father's highest education attained?

❍❍ Some Secondary School or less (1)

❍❍ Secondary School (2)

❍❍ Some University (3)

❍❍ Bachelors or equivalent

(4) ❍❍ Masters or equivalent

(5) ❍❍ Vocational (6)

❍❍ Professional Degree (MD, JD, etc.) (7)

❍❍ PhD or equivalent (8)

Q3.12 Mother's Current

Occupation: Q3.13 Father's Current

Occupation:

Q4.1 Did you graduate?

❍❍ Yes (1)

❍❍ No (2)

If Yes Is Selected, Then Skip To End of Block

Q4.2 Are you still enrolled in your program?

❍❍ Yes (1)

❍❍ No (2)

Answer If Are you still enrolled in your program? No Is Selected

Q4.3 How much of your program did you complete?

❍❍ Less than half (1)

❍❍ Half (2)

❍❍ More than half (3)

❍❍ Other (4) ____________________

Answer If Are you still enrolled in your program? Yes Is Selected

Q4.4 What is your area of study/major?

Answer If Are you still enrolled in your program? No Is Selected

Q4.5 What was your area of study/major?

Answer If Are you still enrolled in your program? No Is Selected

Q4.6 Why did you discontinue your studies?

❑❑ Program Quality (1)
❑❑ Financial difficulty (2)
❑❑ Family responsibilities/childbearing (3)
❑❑ GATE funding discontinued (4)
❑❑ Other (5) ____________________

Answer If Are you still enrolled in your program? No Is Selected

Q4.7 Are you currently employed?

❍❍ Yes (1)
❍❍ No (2)

Answer If Are you still enrolled in your program? Yes Is Selected

Q4.8 Are you currently working while enrolled in your program?

❍❍ Yes (1)
❍❍ No (2)

Answer If Are you currently working while enrolled in your program? Yes Is Selected

Q4.9 I am employed:

❍❍ Full-time (1)
❍❍ Part-time (2)

Answer If Are you currently employed? Yes Is Selected

Q4.10 Was the qualification you were pursuing related to your current job?

❍❍ Yes (1)
❍❍ No (2)

Answer If Are you currently working while enrolled in your program? Yes Is Selected

Q4.11 Is the qualification you are pursuing related to your current job?

❍❍ Yes (1)
❍❍ No (2)

Answer If Are you currently working while enrolled in your program? Yes Is Selected

Q4.12 Why are your pursuing your current course of study?

❑❑ Change of career (1)

❑❑ Likelihood of promotion (2)

❑❑ Higher salary (3)

❑❑ Other (4) ____________________

Q67 What year did you graduate from your studies funded by GATE?

Q5.1 To graduate from the course of study funded by GATE, it took you
❍❍ Less time than the program expected (1)
❍❍ The expected time (2)
❍❍ Longer than was expected (3)

Q5.2 What level(s) of qualification was attained using GATE funding? (Select all that apply)
❑❑ Vocational (1)
❑❑ Associates (or equivalent)
(2) ❑❑ Bachelors (or
equivalent) (3) ❑❑ Professional
(JD, MD, etc) (4)
❑❑ Masters/MBA (or equivalent) (5)
❑❑ PhD (or equivalent) (6)

Q5.3 While pursuing your education funded by GATE, did you attend school
❍❍ Full-time (1)
❍❍ Part-time (2)
❍❍ A mix of both (3)

Q5.4 What was your area of study/major, funded by GATE?

Q5.5 How would you rate the quality of your education funded by GATE? On the scale below choose the appropriate level of quality: 1 = low quality, 5 = high quality
❍❍ 1 (1)
❍❍ 2 (2)
❍❍ 3 (3)
❍❍ 4 (4)
❍❍ 5 (5)

Q5.6 I started my education funded by GATE:
❍❍ Immediately after Secondary School (1)
❍❍ Immediately after undergraduate degree (3)
❍❍ After taking some time off (2)

Answer If I started my education funded by GATE: After taking some time off Is Selected
Q5.7 How long did it take after Secondary School before you started your education funded by GATE? (in years)
❍❍ less than a year (1)
❍❍ Between 1 and 2 years (2)
❍❍ Between 2 and 3 years (3)
❍❍ Between 3 and 4 years (4)
❍❍ More than 4 years (5)

Q5.8 Were you employed prior to enrolling in your program funded by GATE?
❍❍ Yes (1)
❍❍ No (2)

Answer If Were you employed prior to enrolling in your program funded by GATE? Yes Is Selected
Q5.9 Before starting your education funded by GATE, you worked
❍❍ Full-time (1)
❍❍ Part-time (2)

Q5.10 Did you work while pursuing your studies?
❍❍ Yes (1)
❍❍ No (2)

Answer If Has your formal training or education provided you with the skills needed to perform your current... Yes Is Selected
Q5.11 While pursuing studies, you worked
❍❍ Full-time (1)
❍❍ Part-time (2)

Q6.1 What is your current employment status?

❍❍ Employed (1)

❍❍ Unemployed (2)

Answer If What is your current employment status? Unemployed Is Selected

Q6.2 How long have you been unemployed?

❍❍ Less than 1 year (1)

❍❍ Between 1 and 2 years (2)

❍❍ Between 2 and 3 years (3)

❍❍ More than 3 years (4)

Q7.1 Have you actively pursued migrating to another country?

❍❍ Yes (1)

❍❍ No (2)

Answer If Have you actively pursued migrating to another country? Yes Is Selected

Q7.2 To which country/region? (Select all that apply)

❑❑ USA (1)

❑❑ Canada (2)

❑❑ United Kingdom (3)

❑❑ CARICOM (4)

❑❑ Other (5) ____________________

Q8.1 Thank you for your participation in this survey. PLEASE CLICK "SUBMIT" TO COMPLETE THE SURVEY. If you will like to participate in a 30-minute interview to discuss GATE and employment in Trinidad and Tobago, please provide your email address below to be contacted by the researcher. Your email address will NOT be tied to your previous responses in the survey. If selected, Interview Participants will be given an honorarium of TT$100.00.

Q8.2 (Optional) Email address to be contacted to participate in 30-minute interview:

Answer If What is your current employment status? Employed Is Selected

Q9.1 What is your current occupation?

Q9.2 Was the qualification you earned via GATE a requirement in the job specification for your current job?

❍❍ Yes (1)

❍❍ No (2)

Q9.3 In what sector is your current job?
❍❍ Government/Public Entity (1)
❍❍ Private (2)
❍❍ Non-profit (3)

Q9.4 In what industry is your current occupation?

❍❍ Sugar (cultivation and manufacture) (1)
❍❍ Other agriculture, forestry, hunting and fishing (2)
❍❍ Petroleum and gas, including production, refining and service contractors (3)
❍❍ Other mining and quarrying (4)
❍❍ Other manufacturing (excluding sugar and oil) (5)
❍❍ Electricity and water (6)
❍❍ Construction (7)
❍❍ Wholesale and retail trade, restaurants and hotels (8)
❍❍ Transport, storage and communication (9)
❍❍ Financing, insurance, real estate and business services (10)
❍❍ Community, social and personal services (11)
❍❍ Other (12)____________________

Q9.5 Where is your current job located? (name of town/city)

Q9.6 Did your degree/qualification earned via GATE funding positively impact your salary?

❍❍ Yes (1)
❍❍ No (2)

Q9.7 Are you currently employed in a field related to the qualification you received via GATE funding?
❍❍ Yes (1)
❍❍ No (2)

Q9.8 Are you currently repaying any loans connected to your studies?
❍❍ Yes (1)
❍❍ No (2)

Q9.9 How much education is currently required to get a job like yours?
❍❍ Primary school graduate (1)
❍❍ Some secondary school (2)
❍❍ Secondary school graduate (3)
❍❍ Technical/vocational certificate (4)
❍❍ Some university (5)
❍❍ University graduate (6)
❍❍ Professional degree (7)

Q9.10 Do you consider you have skills or qualifications to do a more demanding job than the one you have now?
❍❍ Yes (1)
❍❍ No (2)

Q9.11 Has your formal training or education provided you with the skills needed to perform your current job?
❍❍ Yes (1)
❍❍ No (2)

APPENDIX B: Newspaper Advertisement

A52 **sports** Guardian www.guardian.co.tt Monday, October 12, 2015

Novak Djokovic of Serbia celebrates after beating Rafael Nadal of Spain in their men's singles final match in the China Open tennis tournament at the National Tennis Stadium in Beijing, yesterday. AP PHOTO

Djokovic makes it six in Beijing

BEIJING—Novak Djokovic defeated Rafael Nadal 6-2, 6-2 yesterday to win his sixth China Open title and improve his record at the tournament to a sterling 29-0.

Djokovic had seven aces to none for his Spanish rival, and saved both break points he faced in the match, which was the 45th between the two players.

Nadal still leads 23-22 but hasn't beaten Djokovic since the French Open final last year and hasn't prevailed on hard courts since the 2013 US Open final.

The Spaniard hurt his foot early in the second set and called for the trainer during a changeover. He said he would see how he feels today and hopes he'll be able to play next week's Shanghai Masters.

The top-ranked Djokovic has been so dominant in Beijing, he's only lost three sets in six years. This year, he also only lost 14 games coming into the final, the fewest in his career at an ATP Tour event with a minimum of four matches played, according to the ATP.

Djokovic will be the top-seeded player for the Shanghai Masters starting today, which also features Roger Federer, Andy Murray, Stan Wawrinka and Nadal.

In the women's final, Wimbledon runner-up Garbine Muguruza captured her second career WTA Tour title at the China Open, rallying in both sets to defeat Timea Bacsinszky 7-5, 6-4.

Muguruza trailed 5-2 in the opening set before winning five straight games to clinch it, then went down an early break in the second set before coming back yet again.

The Spaniard will rise to a career-high ranking of No. 4 today, while Bacsinszky will break into the top ten for the first time.

Muguruza struggled after her breakthrough performance at Wimbledon, losing in the second round of the US Open, but she has played some of her best tennis in the past two weeks. She also reached the final last week in Wuhan, retiring in the second set with a left ankle injury while trailing Venus Williams.

Paire no match for Wawrinka in Tokyo

TOKYO — French Open champion Stan Wawrinka defeated Benoit Paire 6-2, 6-4 yesterday to win the Japan Open for his career-best fourth title of the season.

The top-seeded Wawrinka was in control from the outset and secured the win in 65 minutes when the unseeded Paire double-faulted on match point.

"I was playing my best game today," said Wawrinka, who has won all four finals he's appeared in this year. "I was feeling the ball well and playing really aggressively so I'm very happy with the way I played."

In addition to Roland Garros, Wawrinka has won titles this season at Chennai and Rotterdam. He improved to 5-1 against Paire, who upset local favorite Kei Nishikori in the semifinals.

Paire, who struggled with a sore left ankle, was broken four times and committed 12 unforced errors in the match.

"When I woke up this morning I couldn't walk," Paire said. "One hour before the match it was very painful so I said 'what can we do?' I spoke with the physiotherapist and we got an anesthesia for my foot. I couldn't feel anything in my foot and it's tough to move when you don't feel your foot."

Wawrinka is the first Swiss winner in Tokyo since Roger Federer in 2006. In winning the Japan Open he adds his name to a list of champions that includes Rafael Nadal, Pete Sampras and John McEnroe.

"It's a big tournament for me," Wawrinka said. "You've had some amazing winners here over the past. I got a lot of support here all this week and to add this title is very important for me."

APPENDIX C: Newspaper Article

From Page 8

to be applied to the governing bodies of the more than 110 Statutory Boards and other bodies in T&T).

For state boards directors should be motivated by a desire to provide an important service to the public at large.

Many directors of state bodies that have decided to focus upon good governance have found it useful to use the seven international governance principles known as the Nolan Principles. These international principles were developed in the 1990's in a report published in the UK by the Committee of Standards in Public Life that was chaired by Lord Michael Nolan (*see Box 2*).

In small island states there are fewer degrees of separation between individuals compared to the larger developed countries within the Organisation for Economic Cooperation and Development (OECD). In island states maintaining good relationships matter a great deal and good relationships are underscored by professional dealings since reputations are easily lost.

Accordingly, a state-appointed director will be well served if he or she is guided inter alia by the law (the Companies Act), a professional standard (through membership in a professional corporate governance body such as CCGI and the Nolan Principles) and a code (the T&T Corporate Governance Code).

Questions members of state boards should ask:

Does our board:

• Undertake an assessment of the independence of the board each year?

• Publish in the annual report which non-executive directors are considered to be independent?

• Act solely in terms of the best interest of the company?

Do I and the other board members:

• Avoid any financial or other obligation to outside individuals or organisations that might seek to influence us in the performance of our official duties?

• Make choices on merit when making public appointments or governing the process for awarding contracts?

• Hold ourselves accountable to the public for decisions and actions and submit ourselves to whatever scrutiny is appropriate?

• Remain as open as possible about all our decisions and actions we take and give reasons for our decisions?

• Declare any private interests relating to our public duties

• Take steps to avoid any conflicts arising in a way that protects the public interest?

The Caribbean Corporate Governance Institute (CCGI), which is a not-for-profit Foundation, has a mandate to create effective organisations and efficient markets through board directors that can be trusted (based on their training, continuous development and professional values that they formally commit to as professional members), and the research, publication, and monitoring of corporate governance best practice standards appropriate for the Caribbean.

As part of CCGI's programme aimed at public directorships, the CCGI aims to support government ministers, permanent secretaries, CEOs, corporate secretaries, directors and other officers of public bodies in improving governance in the public sector within T&T.

The CCGI is a regional, independent, non-profit, professional membership organisation registered with the Accreditation Council of T&T. CCGI is the award body that provides the certificate and diploma in corporate governance and the chartered director qualification throughout the Caribbean.

The CCGI welcomes membership applications and participation in its courses and events throughout the region. +1 (868) 221-8707 www.caribbeangovernance.org

Where are the GATE graduates?

Ivy League PhD candidate seeks answers

"The government is just wasting money educating all these people for them to go abroad to make big money".

It is common as one discusses the many benefits and drawbacks to the continuation of the Government Assistance for Tuition Expenses (GATE) programme for someone to point out that GATE has done nothing more than assist more young people to leave T&T after graduation. This exodus of qualified citizens usually to more developed countries is known as brain drain.

However, contrary to popular belief, requests for employment visas to the three most popular destinations for skilled graduates (the USA, Canada and the UK), have at best remained constant since the advent of GATE.

So, where are these thousand of GATE graduates? They are all still right here in T&T starting businesses, or working in the local public and private sectors. Chances are nearly 20 per cent of the employed people you interact with on a daily basis has benefited from GATE in one way or another.

With the impending budget having to face the realities of depressed oil and natural gas prices on the world markets, the sustainability of GATE is a reality all citizens will have to contemplate if revenue projections remain suppressed.

In the IMF and World Bank brands of development economics, it is commonplace that these agencies first recommend that developing economies, like ours, examine the sustainability of all subsidies. GATE and the myriad social programmes will undoubtedly come under close scrutiny should the need arise.

In examining the sustainability of GATE, one of the first matters to be considered will be the public and private returns to the government's investment in GATE. On the public end, studies will be needed to ascertain whether the public benefits derived from having GATE outweigh the significant costs of the programme.

Has the expenditure on social transfers been reduced with more citizens accessing tertiary education?

Concomitantly, has tax revenue increased from the higher wages that usually accompany possessing a university degree?

On the private side, one would need to ascertain whether on a personal level, the average citizen is benefiting from the university degree GATE provides.

Has access to higher education improved for all citizens?

Has GATE resulted in better-paying jobs?

Are the right type of jobs available for the numerous graduates churned out each year by both public and private higher education institutions?

One of the real concerns—as more graduates are produced to be added to the local labour market—is overeducation. In the academic literature, overeducation is observed to be occurring when workers in the labour market are occupying positions that require less schooling than they possess, often at lower wages.

Overeducation is of real concern in an economy like T&T, with little economic diversification, because of the negative correlation between overeducation and productivity. The morale of these graduates is affected as they leave their programmes with hope of a better, well paying job.

Further, overeducation negatively affects the productivity of the workplaces where these graduates will eventually settle.

With little empirical evidence of benefit-cost analyses of the GATE programme and of the employment outcomes for GATE graduates, a local education researcher is attempting to find out what are the real returns to an investment in GATE for everyone involved – the government, the higher education community, the student, and the business community, among others. Such analyses are needed for the future of GATE to be strengthened.

Denzil Streete, a product of Morvant Anglican School and QRC. He is a PhD candidate specialising in the Economics of Education, at Teachers College at Columbia University. If you are a graduate who used GATE funding, feel free to contribute to his findings at www.TTGateStudy.com.

APPENDIX D: Interview Protocol

Interview Protocols for Graduates:

1. How old are you?
2. What secondary school did you attend?
3. What was the highest level you reached?
4. What were the results on your final certificate?
5. Where did you go to school using GATE?
6. What was your major there?
7. Where do you work now?
8. Did your qualifications adequately prepare you for that job? How so? How not?
9. What do you think are the benefits of GATE?
10. Do you think there are any drawbacks to GATE? What are they?
11. How do you think GATE can be improved?
12. Do you think the quality of your education after high school was great? Why? Why not?

Interview Protocols for University Administrators:

1. Which institution are you currently employed with?
2. What is your job title there?
3. What do your job responsibilities include?
4. What is your educational background?
5. How many students are enrolled at your institution?
6. What has your institution’s experience with GATE been?
7. Do you think GATE is an adequate use of the country’s resources? Why? Why not?
8. How do you think GATE can be improved?
9. Do you think the programs at your institution adequately prepare graduates for the workforce? How so?

Interview Protocols for Businesspersons:

1. Which organization are you currently affiliated with?
2. What is your job title there?
3. What is your educational background?

4. What do your job responsibilities include?
5. What is the size of your organization?
6. How many people are employed by members of your organization?
7. What kind of businesses are involved?
8. Do you think GATE adequately prepares graduates for the workforce? How so?
9. Do you think GATE is an adequate use of the country's resources? Why? Why not?
10. How do you think GATE can be improved?
11. Are you satisfied with the quality of post-secondary education in Trinidad and Tobago? Why/why not?
12. Do you think the post-secondary graduates your members are employing are adequately prepared for the workforce? Why/why not?

Interview Protocols for Politicians:

1. Which politically party are you currently affiliated with?
2. What years did you serve in government?
3. How long have you been involved in politics?
4. What is your educational background?
5. How were you involved in setting education policy for Trinidad and Tobago?
6. What was your involvement in establishing/expanding GATE?
7. Do you think GATE adequately prepares graduates for the workforce? How so?
8. Do you think GATE is an adequate use of the country's resources? Why? Why not?
9. How do you think GATE can be improved?
10. Are you satisfied with the quality of post-secondary education in Trinidad and Tobago? Why/why not?

APPENDIX E: IRB APPROVAL

TEACHERS COLLEGE
COLUMBIA UNIVERSITY

Teachers College IRB | *Exempt Study Approval*

To: Denzil Streete
From: Karen Froud, IRB Chair
Subject: IRB Approval: 15-380 Protocol
Date: 07/16/2015

Thank you for submitting your study entitled, "*EXAMINING THE IMPACT OF FREE HIGHER EDUCATION ON EMPLOYMENT IN TRINIDAD AND TOBAGO.* ;" the IRB has determined that your study is **Exempt** from committee review (Category **2**).

Please keep in mind that the IRB Committee must be contacted if there are any changes to your research protocol. The number assigned to your protocol is **15-380**. Feel free to contact the IRB Office by using the "Messages" option in the electronic Mentor IRB system if you have any questions about this protocol.

Please note that your Consent form bears an official IRB authorization stamp. Copies of this form with the IRB stamp must be used for your research work. Further, all research recruitment materials must include the study's IRB-approved protocol number. You can retrieve a PDF copy of this approval letter from the Mentor site.

Best wishes for your research work.

Sincerely,

Karen Froud, Ph.D.
Associate Professor of Neuroscience & Education
IRB Chair

APPENDIX F: Students' Terms & Conditions for GATE Funding

STUDENTS' TERMS AND CONDITIONS FOR TERTIARY TUITION FUNDED BY GATE

1. In consideration of the Government of the Republic of Trinidad and Tobago (the Government) agreeing to finance the tuition fees of the Student for the abovementioned programme of study, the Student agrees to:

   (i) submit to the discipline, supervision and control of the Institution;

   (ii) apply himself/herself diligently to his/her studies throughout his/her entire programme with a view to obtaining the specified qualification and thus maintaining minimum performance standards;

   (iii) authorize the relevant institution of study to release to the Ministry of Tertiary Education and Skills Training (the Ministry) information relating to his/her progress during the tenure of the funding; and

   (iv) comply with any professional standards applicable to his/her programme

2. The student agrees to apply for GATE funding for only **one** programme at a time,

3. The Student shall seek and obtain the approval of the Ministry in writing, in the event that the student:

   (i) abandons his/her programme;

   (ii) proceeds on a leave of absence from his/her programme of study.

4. The Student agrees in the event that he/she withdraws, is suspended or is granted an approved leave of absence from the programme or institution, that he/she will inform the Ministry in writing within one (1) week, in order to access further funding under the GATE Programme.

5. The Student shall inform the Ministry if he/she intends to terminate or suspend the programme of study at the Institution. All financial assistance by the Government will cease until such time as the Student will obtain the approval by the Ministry to continue the GATE funding from the Ministry.

6. The Student shall inform the Ministry forthwith on the successful completion of his/her programme and to accept employment within the Republic of Trinidad and Tobago, in either the public or private sector, for the undermentioned prescribed period. The Student also agrees to inform the Ministry of the details of his/her

employment and his/her period of service shall be related to the cost of the funding and shall be determined as indicated hereunder:

COST OF AWARD	PERIOD OF OBLIGATORY SERVICE
Up to $100,000.00	One (1) year
Over $100,001.00 and up to $300,000.00	Two (2) years
Over $300,001.00 and up to $400,000.00	Three (3) years
Over $400,001.00 and up to $600,000.00	Four (4) years
Over $600,001.00	Five (5) years

7. All monies expended on his/her programme shall be a loan from the Government to the Student and shall be repaid to the Government with interest, provided that if the Student serves the Republic of Trinidad and Tobago for the prescribed period as indicated or if the Student is released from the obligation to serve the Republic of Trinidad and Tobago, the repayment of such loan shall be waived.

8. In the event of the Student :

a. abandons his/her course; or
b. fails to obtain the qualification where such failure is due to the Student not applying himself/herself diligently to his/her studies; or
c. fails to accept employment in the public or the private sector in the Republic of Trinidad and Tobago after the conclusion or termination of the said programme for the specified period of time,

the Student binds himself/herself and agrees that he/she shall be liable immediately to refund to the Government the total amount of the loan made to him/her.

9. Any breach of this Agreement or withdrawal from the programme by failure on his/her part to attain the required performance standard as established in respect of the specified programme, will deny the Student further eligibility for funding by the Government unless approved by the Ministry.

10. If the Student serves the Republic of Trinidad and Tobago for only a part of the specified period he/she shall be required to refund the Government only such proportion of the total sum loaned together with interest due thereon

as the unexpired period of service bears to the total period in Clause 6 above. Such sums shall be a debt by the Student and shall be recoverable by the Government.

11. The Terms of this Agreement constitutes the complete contract between the Government and the Student and no oral statement or promises will be recognized. This Agreement may not be amended or any of its provisions waived except in writing signed by the Parties to this Agreement. This Agreement is a legally binding instrument when signed by the Student and the signatures to the front indicate that the Student has read understood and agreed to the terms herein.

APPENDIX G: SPSS Output for Multinomial Logistic Regression

```
 * uses age, gender , secschooltype, instittype, GATElg, mothered, fathered.

compute fi=(out <= 3).

filter by fi.

fre out  age  gender  mothered2  fathered2

sectype2  instittype2  GateLG.
```


Frequencies

Statistics

		Outcome	Age:	Sex:	mothered2	fathered2	sectype2	instittype2	GATE LG
N	Valid	**493**	**489**	**493**	**493**	**493**	**493**	**493**	**493**
	Missing	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**

Outcome

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ov3	**91**	**18.5**	**18.5**	**18.5**
	ov2	**273**	**55.4**	**55.4**	**73.8**
	ov1	**129**	**26.2**	**26.2**	**100.0**
	Total	**493**	**100.0**	**100.0**	

Orange denotes cell sizes that are so small as to interfere with the regression.

Age:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18.0	**1**	**.2**	**.2**	**.2**
	19.0	**3**	**.6**	**.6**	**.8**
	20.0	**4**	**.8**	**.8**	**1.6**
	21.0	**11**	**2.2**	**2.2**	**3.9**
	22.0	**17**	**3.4**	**3.5**	**7.4**
	23.0	**38**	**7.7**	**7.8**	**15.1**
	24.0	**40**	**8.1**	**8.2**	**23.3**
	25.0	**34**	**6.9**	**7.0**	**30.3**
	26.0	**22**	**4.5**	**4.5**	**34.8**
	27.0	**33**	**6.7**	**6.7**	**41.5**
	28.0	**34**	**6.9**	**7.0**	**48.5**

	29.0	**22**	**4.5**	**4.5**	**53.0**
	30.0	**39**	**7.9**	**8.0**	**60.9**
	31.0	**19**	**3.9**	**3.9**	**64.8**
	32.0	**23**	**4.7**	**4.7**	**69.5**
	33.0	**23**	**4.7**	**4.7**	**74.2**
	34.0	**11**	**2.2**	**2.2**	**76.5**
	35.0	**19**	**3.9**	**3.9**	**80.4**
	36.0	**10**	**2.0**	**2.0**	**82.4**
	37.0	**11**	**2.2**	**2.2**	**84.7**
	38.0	**12**	**2.4**	**2.5**	**87.1**
	39.0	**8**	**1.6**	**1.6**	**88.8**
	40.0	**6**	**1.2**	**1.2**	**90.0**
	41.0	**4**	**.8**	**.8**	**90.8**
	42.0	**4**	**.8**	**.8**	**91.6**
	43.0	**6**	**1.2**	**1.2**	**92.8**
	44.0	**2**	**.4**	**.4**	**93.3**
	45.0	**4**	**.8**	**.8**	**94.1**
	46.0	**1**	**.2**	**.2**	**94.3**
	47.0	**4**	**.8**	**.8**	**95.1**
	49.0	**4**	**.8**	**.8**	**95.9**
	50.0	**3**	**.6**	**.6**	**96.5**
	51.0	**2**	**.4**	**.4**	**96.9**
	52.0	**2**	**.4**	**.4**	**97.3**
	53.0	**1**	**.2**	**.2**	**97.5**
	54.0	**3**	**.6**	**.6**	**98.2**
	55.0	**2**	**.4**	**.4**	**98.6**

	56.0	**2**	**.4**	**.4**	**99.0**
	57.0	**3**	**.6**	**.6**	**99.6**
	59.0	**1**	**.2**	**.2**	**99.8**
	60.0	**1**	**.2**	**.2**	**100.0**
	Total	**489**	**99.2**	**100.0**	
Missing	System	**4**	**.8**		
Total		**493**	**100.0**		

Sex:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.0	**107**	**21.7**	**21.7**	**21.7**
	2.0	**386**	**78.3**	**78.3**	**100.0**
	Total	**493**	**100.0**	**100.0**	

mothered2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	**.2**	**.2**	**.2**

	1 Less than Sec	**188**	**38.1**	**38.1**	**38.3**
	2 Sec.	**168**	**34.1**	**34.1**	**72.4**
	3 Some Univ.	**34**	**6.9**	**6.9**	**79.3**
	4 BA	**49**	**9.9**	**9.9**	**89.2**
	5 MA or higher	**20**	**4.1**	**4.1**	**93.3**
	6 Voc	**33**	**6.7**	**6.7**	**100.0**
	Total	**493**	**100.0**	**100.0**	

fathered2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	**1.6**	**1.6**	**1.6**
	1 Less than Sec	**181**	**36.7**	**36.7**	**38.3**
	2 Sec.	**149**	**30.2**	**30.2**	**68.6**
	3 Some Univ.	**31**	**6.3**	**6.3**	**74.8**
	4 BA	**36**	**7.3**	**7.3**	**82.2**
	5 MA or higher	**26**	**5.3**	**5.3**	**87.4**
	6 Voc	**62**	**12.6**	**12.6**	**100.0**
	Total	**493**	**100.0**	**100.0**	

sectype2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	**.8**	**.8**	**.8**
	1 Gov.	**252**	**51.1**	**51.1**	**51.9**
	2 Denom.	**209**	**42.4**	**42.4**	**94.3**
	3 Private/Other	**28**	**5.7**	**5.7**	**100.0**
	Total	**493**	**100.0**	**100.0**	

institttype2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	**1.0**	**1.0**	**1.0**
	1 UWI	**238**	**48.3**	**48.3**	**49.3**
	2 UTT	**35**	**7.1**	**7.1**	**56.4**
	3 COSTAATT	**48**	**9.7**	**9.7**	**66.1**
	4 Pub. Other	**30**	**6.1**	**6.1**	**72.2**
	5 Pub. Regional	**22**	**4.5**	**4.5**	**76.7**
	6 Lg. Priv.	**77**	**15.6**	**15.6**	**92.3**
	7 Priv. Other	**36**	**7.3**	**7.3**	**99.6**
	8 Voc.	2	**.4**	**.4**	**100.0**
	Total	**493**	**100.0**	**100.0**	

GATE LG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ARI	**43**	**8.7**	**8.7**	**8.7**
	CHAG	**51**	**10.3**	**10.3**	**19.1**
	DIEGO	**43**	**8.7**	**8.7**	**27.8**
	FOR	2	**.4**	**.4**	**28.2**
	LAV	**64**	**13.0**	**13.0**	**41.2**
	None	2	**.4**	**.4**	**41.6**
	POS	**42**	**8.5**	**8.5**	**50.1**
	Rural	**100**	**20.3**	**20.3**	**70.4**
	SANF	**52**	**10.5**	**10.5**	**80.9**
	TOB	**13**	**2.6**	**2.6**	**83.6**
	TUN	**81**	**16.4**	**16.4**	**100.0**
	Total	**493**	**100.0**	**100.0**	

These small cells are corrected by the following.

do if out <= 3 and

(mothered2 = '' or fathered2 = '' or sectype2 = ''

```
or instittype2 = '' or instittype2 = '8 Voc.'

or GateLG = 'FOR' or GateLG = 'None').

compute fi=0.

end if.

exe.

filter by fi.

fre out  age  gender  mothered2  fathered2

sectype2  instittype2  GateLG.
```



```
*Listwise N of 493 becomes 466 with these changes;  they solve the problem of
"singularities in the Hessian matrix" and allow the regression to work.
```

```
NOMREG out (BASE=LAST ORDER=ASCENDING)

   BY mothered2 fathered2  gender  sectype2 instittype2 GateLG2

   WITH age

 /CRITERIA CIN(95) DELTA(0) MXITER(100) MXSTEP(5) CHKSEP(20) LCONVERGE(0) PCONVERGE(0.000001)
```

```
  SINGULAR(0.00000001)

/MODEL

/STEPWISE=PIN(.05) POUT(0.1) MINEFFECT(0) RULE(SINGLE) ENTRYMETHOD(LR) REMOVALMETHOD(LR)

/INTERCEPT=INCLUDE

/PRINT=PARAMETER SUMMARY LRT CPS STEP MFI IC.
```

Nominal Regression (= Multinomial Logistic Regression)

Case Processing Summary

		N	Marginal Percentage
Outcome	ov3	**84**	**18.0%**
	ov2	**259**	**55.6%**
	ov1	**123**	**26.4%**
mothered2	1 Less than Sec	**178**	**38.2%**
	2 Sec.	**160**	**34.3%**
	3 Some Univ.	**32**	**6.9%**
	4 BA	**46**	**9.9%**
	5 MA or higher	**18**	**3.9%**
	6 Voc	**32**	**6.9%**
fathered2	1 Less than Sec	**176**	**37.8%**
	2 Sec.	**142**	**30.5%**
	3 Some Univ.	**29**	**6.2%**
	4 BA	**33**	**7.1%**
	5 MA or higher	**24**	**5.2%**
	6 Voc	**62**	**13.3%**
Sex:	1.0	**101**	**21.7%**
	2.0	**365**	**78.3%**
sectype2	1 Gov.	**243**	**52.1%**
	2 Denom.	**195**	**41.8%**
	3 Private/Other	**28**	**6.0%**

instittype2	1 UWI	**230**	**49.4%**
	2 UTT	**33**	**7.1%**
	3 COSTAATT	**46**	**9.9%**
	4 Pub. Other	**27**	**5.8%**
	5 Pub. Regional	**20**	**4.3%**
	6 Lg. Priv.	**75**	**16.1%**
	7 Priv. Other	**35**	**7.5%**
GateLG2		**370**	**79.4%**
	Rural	**96**	**20.6%**
Valid N		466	**100.0%**
Missing		**4**	
Total		**470**	
Subpopulation		**435[a]**	

a. The dependent variable has only one value observed in 420 (96.6%) subpopulations.

Model Fitting Information

Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	**898.945**	**907.234**	**894.945**			
Final	**919.058**	**1101.402**	**831.058**	**63.888**	**42**	.016

A significant model on the whole.

Pseudo R-Square

Cox and Snell	**.128**
Nagelkerke	**.149**
McFadden	**.069**

The model explains somewhere between 6.9% and 14.9% of the variance in the outcome (estimates).

Effect	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	**919.058**	**1101.402**	**831.058[a]**	**.000**	**0**	**.**
age	**924.203**	**1098.258**	**840.203**	**9.145**	**2**	.010
mothered2	**912.154**	**1053.057**	**844.154**	**13.097**	**10**	**.218**
fathered2	**906.231**	**1047.133**	**838.231**	**7.173**	**10**	**.709**
gender	**920.257**	**1094.313**	**836.257**	**5.200**	**2**	**.074**
sectype2	**914.953**	**1080.721**	**834.953**	**3.895**	**4**	**.420**
instittype2	**913.090**	**1045.703**	**849.090**	**18.032**	**12**	**.115**
GateLG2	**915.541**	**1089.596**	**831.541**	**.483**	**2**	**.785**

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Age is the only significant predictor. On the whole, it is predictive, but below we see that it is not especially significant as a predictor of either of 2 specific differences: a) being ov3 as opposed to ov1 (*p* = .088); b) being ov2 as opposed to ov1 (*p* = .181).

Parameter Estimates

Outcome[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
ov3	Intercept	**-.669**	**1.457**	**.211**	**1**	**.646**			
	age	**-.044**	**.026**	**2.919**	**1**	.088	**.957**	**.909**	**1.007**
	[mothered2=1 Less than Sec]	**.353**	**.755**	**.219**	**1**	**.640**	**1.423**	**.324**	**6.250**
	[mothered2=2 Sec.]	**1.372**	**.738**	**3.455**	**1**	**.063**	**3.941**	**.928**	**16.739**
	[mothered2=3 Some Univ.]	**1.228**	**.885**	**1.927**	**1**	**.165**	**3.415**	**.603**	**19.344**
	[mothered2=4 BA]	**.264**	**.860**	**.094**	**1**	**.759**	**1.302**	**.241**	**7.029**
	[mothered2=5 MA or higher]	**1.240**	**1.038**	**1.427**	**1**	**.232**	**3.454**	**.452**	**26.402**
	[mothered2=6 Voc]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[fathered2=1 Less than Sec]	**-.287**	**.488**	**.344**	**1**	**.557**	**.751**	**.288**	**1.955**
	[fathered2=2 Sec.]	**-.477**	**.477**	**.999**	**1**	**.317**	**.621**	**.244**	**1.581**
	[fathered2=3 Some Univ.]	**-1.022**	**.772**	**1.753**	**1**	**.186**	**.360**	**.079**	**1.634**
	[fathered2=4 BA]	**.089**	**.721**	**.015**	**1**	**.902**	**1.093**	**.266**	**4.492**

	[fathered2=5 MA or higher]	**.195**	**.749**	**.068**	**1**	**.794**	**1.216**	**.280**	**5.275**
	[fathered2=6 Voc]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[gender=1.0]	**.242**	**.390**	**.387**	**1**	**.534**	**1.274**	**.594**	**2.736**
	[gender=2.0]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[sectype2=1 Gov.]	**.997**	**.819**	**1.481**	**1**	**.224**	**2.710**	**.544**	**13.502**
	[sectype2=2 Denom.]	**1.141**	**.833**	**1.879**	**1**	**.170**	**3.131**	**.612**	**16.011**
	[sectype2=3 Private/Other]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[instittype2=1 UWI]	**.128**	**.617**	**.043**	**1**	**.836**	**1.137**	**.339**	**3.809**
	[instittype2=2 UTT]	**.332**	**.759**	**.191**	**1**	**.662**	**1.394**	**.315**	**6.174**
	[instittype2=3 COSTAATT]	**-.812**	**.776**	**1.095**	**1**	**.295**	**.444**	**.097**	**2.031**
	[instittype2=4 Pub. Other]	**2.152**	**.985**	**4.770**	**1**	**.029**	**8.598**	**1.247**	**59.284**
	[instittype2=5 Pub. Regional]	**-.375**	**1.040**	**.130**	**1**	**.719**	**.687**	**.090**	**5.280**
	[instittype2=6 Lg. Priv.]	**-.088**	**.697**	**.016**	**1**	**.900**	**.916**	**.234**	**3.591**
	[instittype2=7 Priv. Other]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[GateLG2=]	**-.107**	**.360**	**.088**	**1**	**.767**	**.899**	**.444**	**1.820**
	[GateLG2=Rural]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
ov2	Intercept	**-.467**	**.889**	**.276**	**1**	**.599**			
	age	**.022**	**.016**	**1.788**	**1**	.181	**1.022**	**.990**	**1.056**
	[mothered2=1 Less than Sec]	**-.021**	**.469**	**.002**	**1**	**.964**	**.979**	**.390**	**2.456**
	[mothered2=2 Sec.]	**.460**	**.472**	**.952**	**1**	**.329**	**1.585**	**.628**	**3.997**
	[mothered2=3 Some Univ.]	**.005**	**.635**	**.000**	**1**	**.994**	**1.005**	**.289**	**3.492**
	[mothered2=4 BA]	**-.392**	**.563**	**.485**	**1**	**.486**	**.676**	**.224**	**2.036**
	[mothered2=5 MA or higher]	**.616**	**.806**	**.584**	**1**	**.445**	**1.851**	**.382**	**8.982**
	[mothered2=6 Voc]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[fathered2=1 Less than Sec]	**.322**	**.386**	**.696**	**1**	**.404**	**1.380**	**.648**	**2.941**

	[fathered2=2 Sec.]	**-.055**	**.388**	**.020**	**1**	**.887**	**.946**	**.442**	**2.025**
	[fathered2=3 Some Univ.]	**.107**	**.565**	**.036**	**1**	**.849**	**1.113**	**.368**	**3.367**
	[fathered2=4 BA]	**.433**	**.593**	**.534**	**1**	**.465**	**1.543**	**.482**	**4.934**
	[fathered2=5 MA or higher]	**-.148**	**.626**	**.056**	**1**	**.813**	**.862**	**.253**	**2.939**
	[fathered2=6 Voc]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[gender=1.0]	**.627**	**.297**	**4.468**	**1**	**.035**	**1.872**	**1.047**	**3.349**
	[gender=2.0]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[sectype2=1 Gov.]	**.059**	**.454**	**.017**	**1**	**.897**	**1.061**	**.436**	**2.580**
	[sectype2=2 Denom.]	**.384**	**.466**	**.680**	**1**	**.410**	**1.469**	**.589**	**3.662**
	[sectype2=3 Private/Other]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[instittype2=1 UWI]	**-.002**	**.444**	**.000**	**1**	**.996**	**.998**	**.418**	**2.383**
	[instittype2=2 UTT]	**-.384**	**.595**	**.417**	**1**	**.519**	**.681**	**.212**	**2.187**
	[instittype2=3 COSTAATT]	**-.803**	**.525**	**2.336**	**1**	**.126**	**.448**	**.160**	**1.254**
	[instittype2=4 Pub. Other]	**1.219**	**.860**	**2.009**	**1**	**.156**	**3.382**	**.627**	**18.244**
	[instittype2=5 Pub. Regional]	**.208**	**.685**	**.092**	**1**	**.761**	**1.231**	**.322**	**4.716**
	[instittype2=6 Lg. Priv.]	**-.215**	**.496**	**.189**	**1**	**.664**	**.806**	**.305**	**2.131**
	[instittype2=7 Priv. Other]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**
	[GateLG2=]	**.108**	**.284**	**.144**	**1**	**.705**	**1.114**	**.638**	**1.943**
	[GateLG2=Rural]	**0[b]**	**.**	**.**	**0**	**.**	**.**	**.**	**.**

a. The reference category is: ov1.

b. This parameter is set to zero because it is redundant.

*A closer look at the relationship with Age.

means age by out/stat ano.

Means

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Age: * Outcome	**466**	**99.1%**	**4**	**0.9%**	**470**	**100.0%**

Age:

Outcome	Mean	N	Std. Deviation
ov3	27.976	**84**	**6.2092**
ov2	31.259	**259**	**7.6911**
ov1	30.309	**123**	**7.4208**
Total	30.416	**466**	**7.4582**

The mean differences are rather slight.

ANOVA Table

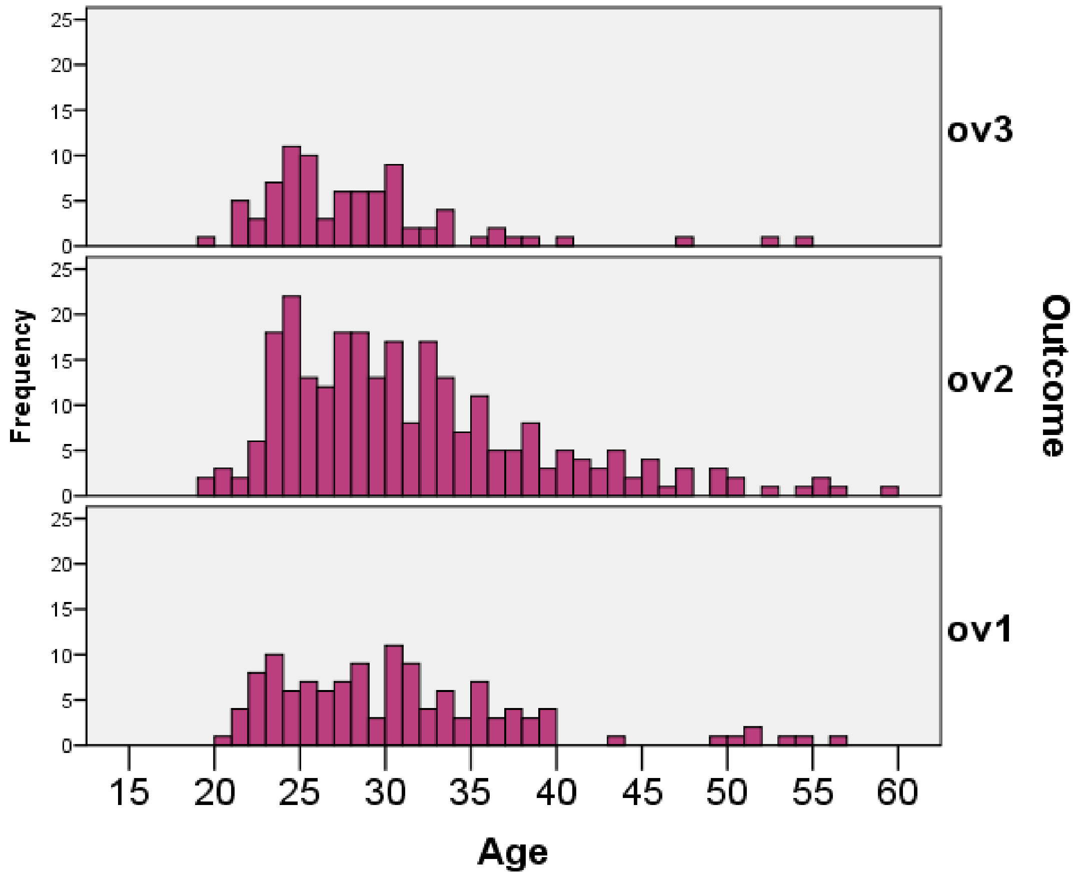
			Sum of Squares	df	Mean Square	F	Sig.
Age: * Outcome	Between Groups	(Combined)	**685.356**	**2**	**342.678**	**6.301**	**.002**
	Within Groups		**25179.880**	**463**	**54.384**		

	Total	**25865.236**	**465**			

Measures of Association

	Eta	Eta Squared
Age: * Outcome	**.163**	**.026**

graph/hist age/panel rowv=out.



Though “significant,” the group differences are so mild that they are difficult to pick out from this graph. Is ov2 averaging a higher age?

Main impression: Age, unlike the other predictors tested, has what is probably a non-random relationship with the outcome, but the effect is not strong.