

Elements of an Income Contingent Loan Program for a Small Petroleum Resource Depleting Economy

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Format of Discussion

- ▶ Introduction
- ▶ Evolution of *Tertiary Level Education* (TLE) funding in Trinidad and Tobago
- ▶ Economic analysis of GATE
- ▶ *Income Contingent Loan* (ICL) as a possible next solution

Introduction

- ▶ The Economist in 1992 noted that,.....*The case for financing universities out of general taxation was always hard to defend in theory: graduates are overwhelmingly drawn from the higher social classes and go on to earn higher-than-average incomes,*

The Economist, 20th June 1992, p. 56

Evolution of TLE Funding in T&T

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1973

- A student revolving loan set up to enable access to TLE

1989

- Student Cess of 10% of the economic cost of attending university.
- Loans available from commercial banks with government as guarantor

2001

- Dollar for Dollar (hereafter $GATE_{DFD}$);
- 50% of tuition fees paid by government to students in 7 institutions

2004

- GATE; guaranteed 50% of tuition fees paid by government to TLE students in all GATE approved institutions
- Means Testing Facility introduced.

2006

- $GATE_{WF}$; guarantee of 100% of tuition fees paid by government to all TLE students.
- HELP; complements GATE by providing funding for both books and personal expenses such as food, accommodation and transportation.

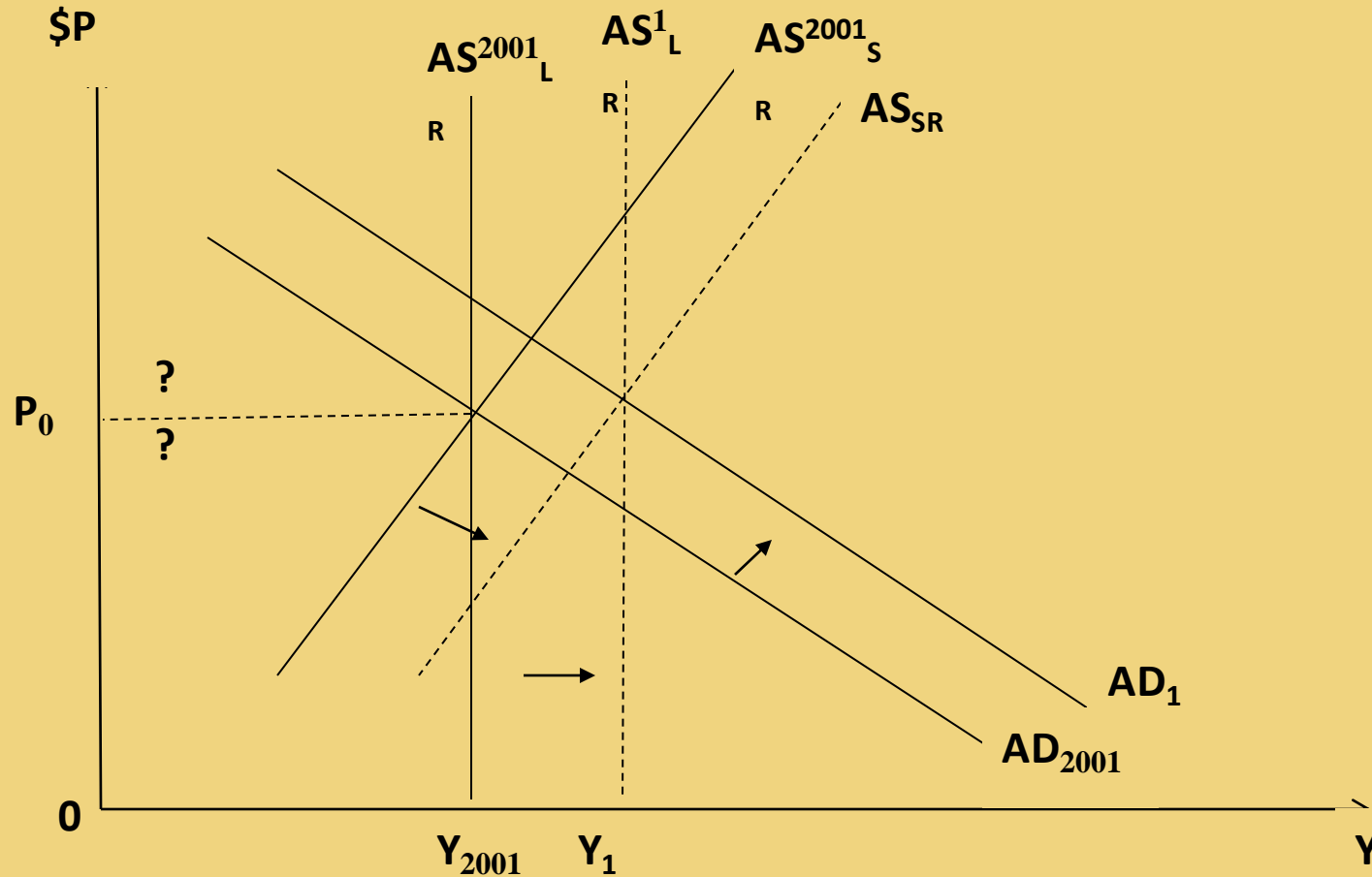
2016

- Changes to GATE
 - Individuals with income <\$10,000 – 100% funding
 - Individuals with income between \$10,000- \$30,000 – 75% funding
 - Individuals with income >\$30,000 – 50% funding
 - Funding for post graduate degrees would be available for programmes which are in alignment with the country's developmental needs.

GATE Policy Intent

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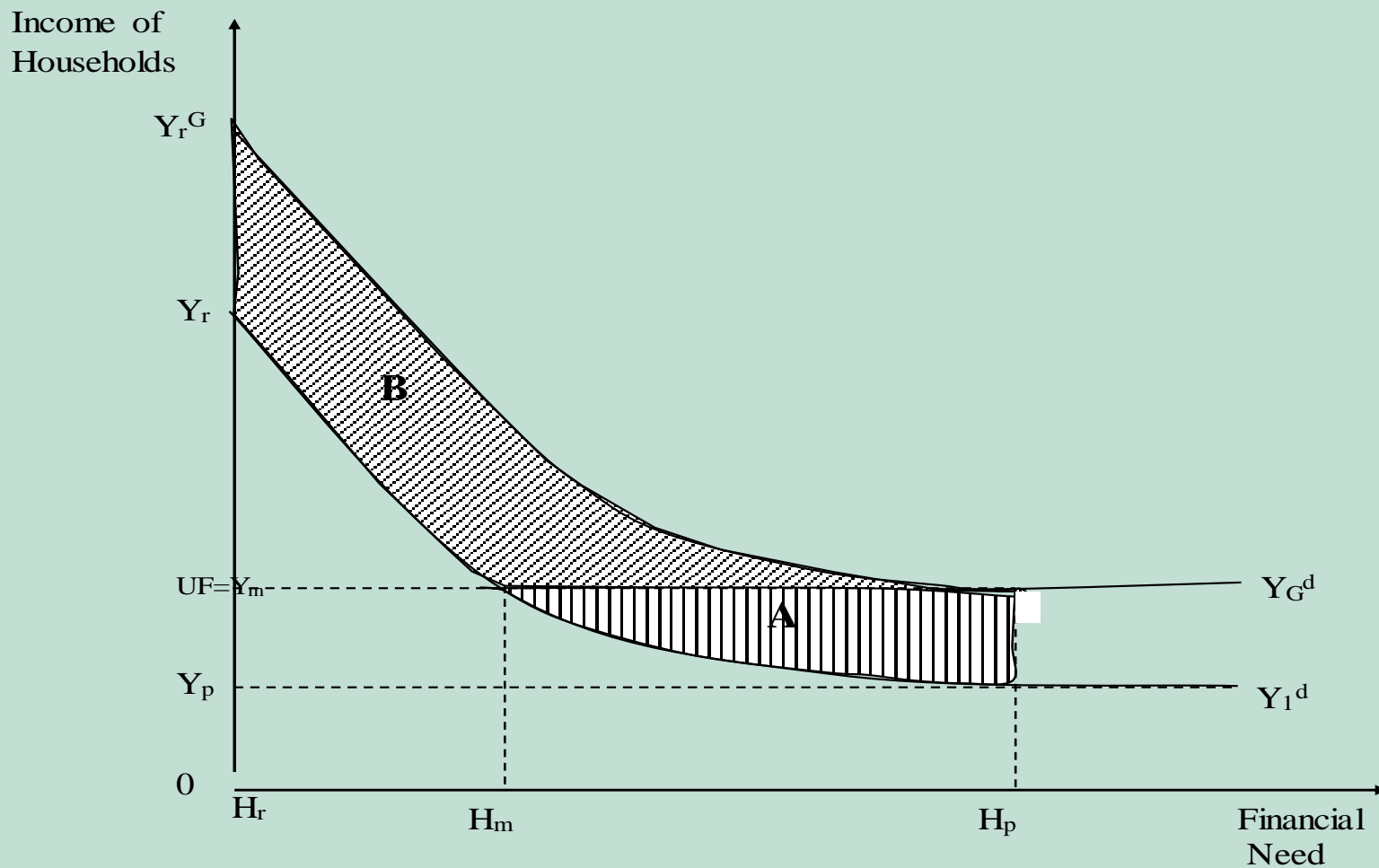
Figure 1: Intended Policy Influence of GATE



Gate Policy Impact

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Figure 2: Effect of “Oil Windfall” GATE on Income of Households Pursuing TLE



Return on Education Investment

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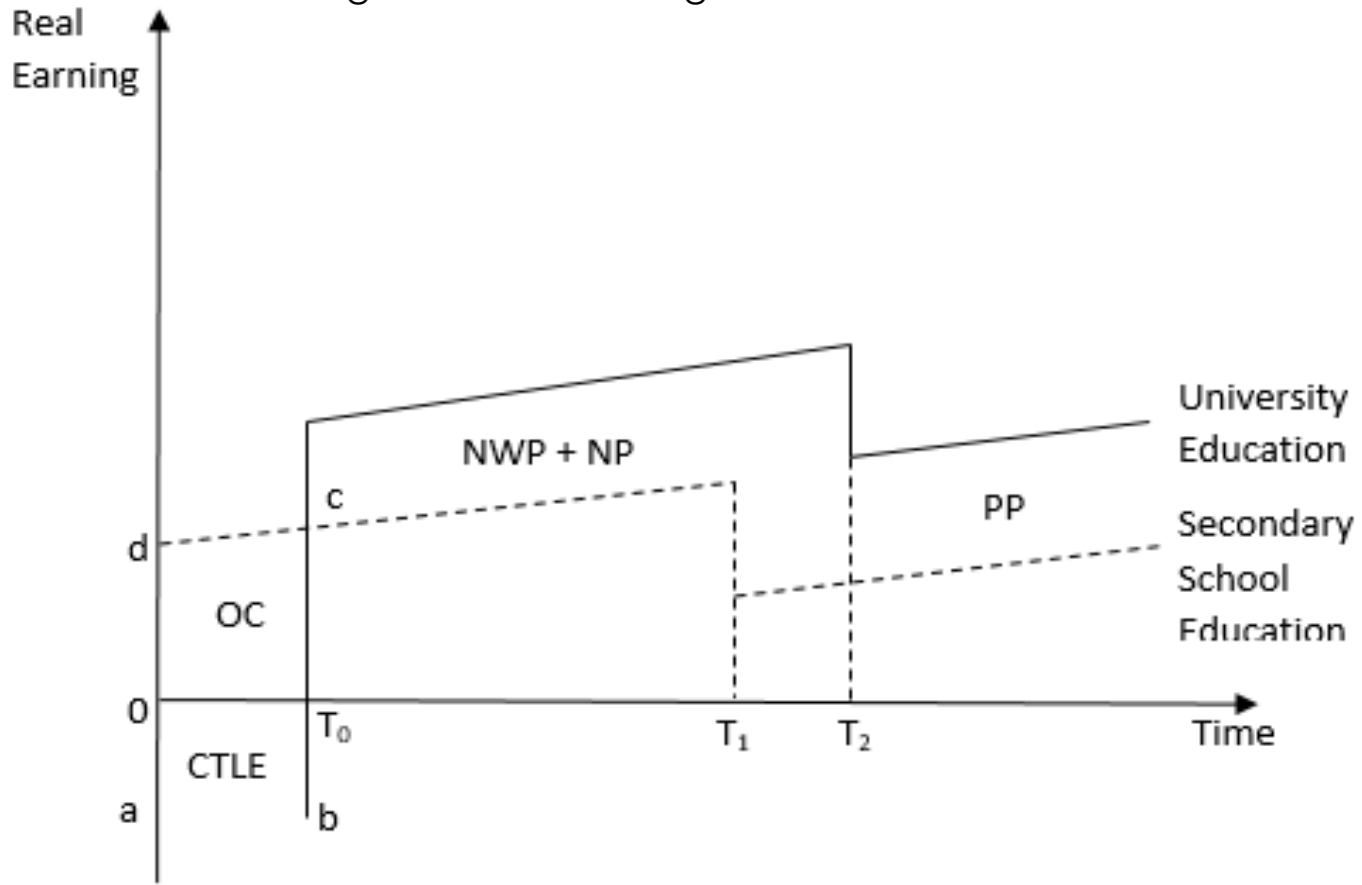
Table 1: Rate of return of investment in education

Region	Social			Private		
	Primary	Secondary	Higher	Primary	Secondary	Higher
Asia	16.2	11.1	11.0	20.0	15.8	18.2
Europe/Middle East/North Africa	15.6	9.7	9.9	13.8	13.6	18.8
Latin America	17.4	12.9	12.3	26.6	17.0	19.5
OECD	8.5	9.4	8.5	13.4	11.3	11.6
Sub-Saharan Africa	25.4	18.4	11.3	37.6	24.6	27.8
World	18.9	13.1	10.8	26.6	17.0	19.0

Source: Psacharopoulos & Patrinos (2004: 114)

Return on Education Investment

Figure 3: Real Earnings Generated



Economic Analysis of GATE

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Table 2: T&T Oil and Gas Rents

	Oil rents (% of GDP)	Natural gas rents (% of GDP)	Oil rents US \$mn	Natural Gas rents US \$mn	GDP US\$
1991	16.18	6.04	\$842	\$314	\$5,203
1995	11.84	7.55	\$631	\$402	\$5,329
2000	12.67	21.35	\$1,033	\$1,741	\$8,154
2005	15.22	46.32	\$2,433	\$7,404	\$15,982
2006	15.84	47.08	\$2,909	\$8,648	\$18,369
2007	12.55	41.66	\$2,717	\$9,015	\$21,642
2008	12.7	47.59	\$3,539	\$13,265	\$27,870
2009	9.81	30.91	\$1,881	\$5,927	\$19,175
2010	10.84	26.53	\$2,281	\$5,581	\$21,038
2011	11.73	24.02	\$2,863	\$5,863	\$24,410
2012	10.13	19.15	\$2,489	\$4,706	\$24,581
2013	8.66	18.17	\$2,361	\$4,952	\$27,257
2014	6.98	10.3	\$2,015	\$2,975	\$28,883
2015p	1.32	5.21	\$342	\$1,350	\$25,907

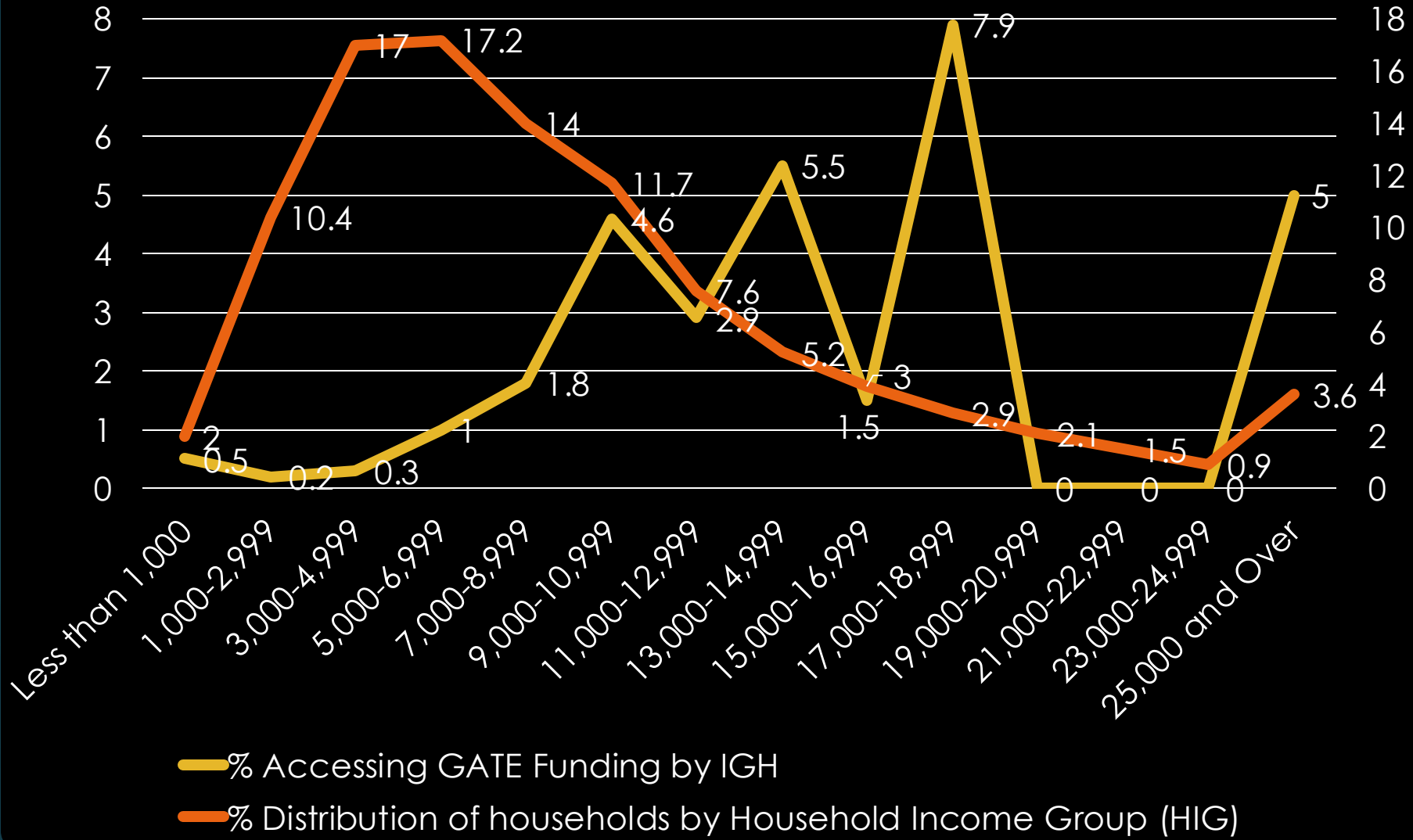
Economic Analysis of GATE

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Table 3: Undergraduate and Post Graduate Enrolment at St Augustine Campus 2000-2015

Graduate at St Augustine campus, 2000-2015				Postgraduate enrolment				
	PG Total	UG Total	Grand Total		Eng	Hum & Ed	Med Sci	Soc Sci
2000	1641	5328	6969	2000	404		58	539
2005	3046	10625	14004	2005	770	629	139	1166
2010	5022	12891	18305	2010	1057	959	404	1988
2011	5520	13062	19342	2011	1171	1058	411	2352
2012	6080	12901	19586	2012	1204	1022	479	2588
2013	6121	12907	19658	2013	1173	1031	501	2601
2014	5928	12489	19020	2014	1147	973	481	2533
2015	5830	12200	18626	2015	1129	947	533	2406
2016	4594	10761	15355					
% change	179.95	101.97	120.33		111.82	50.56	461.1	222.1

Figure 4: Distribution by household income group and % accessing GATE funding



Economic Analysis of GATE

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Table 4: Age Structure in Constant Scenario Population Projection to 2036: Trinidad and Tobago

Age Group	Year					
	2011	2016	2021	2026	2031	2036
Total Population	1328,019*	1350,995	1363,303	1358,680	1340,061	1310,995
Age Distribution						
0-4 years	93,297	92,355	85,598	76,745	71,361	68,984
5-14 years	175,425	182,389	184,053	176,456	160,929	146,767
15-29 years	354,699	298,446	258,852	247,034	253,097	248,041
30-59 years	899,268	890,121	873,091	849,330	835,378	817,510
60 +years	158,894	186,130	220,561	256,149	272,393	283,493
75 + years	36,429	38,753	43,447	52,348	57,713	73,489
Sub populations						
Females 15-49 years	409,491	397,510	387,510	376,834	368,973	352,378
Young Dependent Population (0-14 years)	20.25	20.33	19.77	18.64	17.3343	16.46
Elderly Dependent Population (65 + years)	7.7	8.96	10.51	12.52	14.68	15.67

Economic Analysis of GATE

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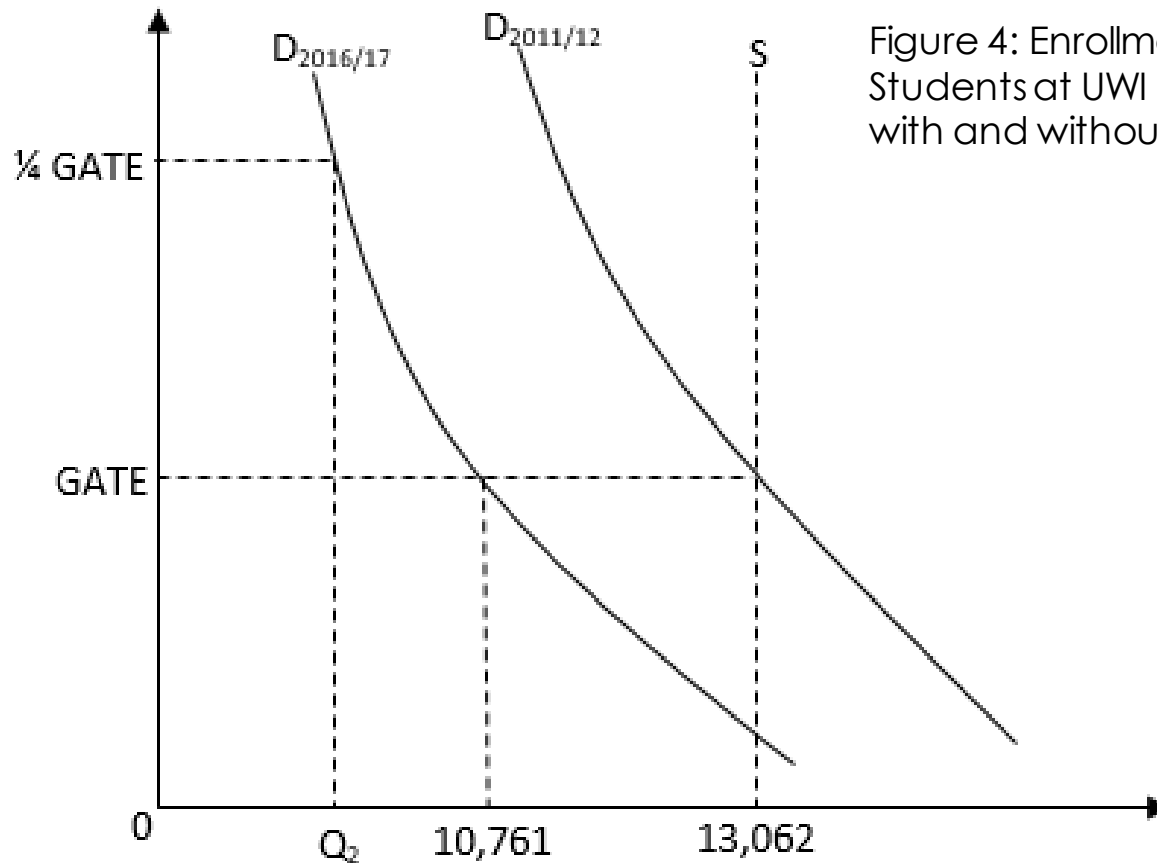


Figure 4: Enrollment of UG Students at UWI St Augustine, with and without GATE

Economic Analysis of GATE

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Table 5: Reserves-to-production ratio for crude oil and natural gas in T&T, 1991 -2015	
	Natural gas (years)
1991	48.7
1995	57.3
2000	36.0
2005	18.8
2006	15.1
2007	12.3
2008	12.2
2009	10.7
2010	8.6
2011	9.9
2012	8.9
2013	8.2
2014	8.2
2015	8.2

Source: BP Statistical Review of World Energy 2005-2016, CBT Handbook of Key Economic and Financial Statistics

Economic Analysis of GATE

Table 6: SEA 2015 Results

District	Means		
	Mathematics	Language Arts	Creative Writing
Caroni	63.2	64.1	37.4
North Eastern	53.0	54.5	34.3
Port of Spain and Environs	57.8	60.0	35.4
St. George East	60.3	62.0	35.8
St Patrick	59.3	59.7	37.4
South Eastern	56.9	57.2	34.0
Victoria	67.3	67.5	40.2
Tobago	53.9	57.1	34.6
National Average	60.2	61.4	1515

Recommendations to the Government

Funding Permutations can be Considered

1. Free for all
2. Upfront tuition fee
3. ICL
4. Graduate Tax
5. Combined strategy of b, c or d

Income Contingent Loans

► Friedman in support of ICLs noted

“...the central government, might likewise deal directly with the individual seeking such education. If it did so, it would make funds available to him to finance his education, not as a subsidy but as "equity" capital. In return, he would obligate himself to pay the state a specified fraction of his earnings above some minimum, the fraction and minimum being determined to make the program self-financing. Such a program would eliminate existing imperfections in the capital market and so widen the opportunity of individuals to make productive investments in themselves, while at the same time assuring that the costs are borne by those who benefit most directly, rather than by the population at large

(Friedman, 1955, page 10).

Income Contingent Loans

- ▶ The minimum conditions for an ICL system to work are:
 - ▶ a reliable, preferably universal, system of unique identifiers;
 - ▶ accurate record-keeping of the accruing liabilities of students (while studying);
 - ▶ a collection mechanism with a sound, and if possible, a computerized record-keeping system; and
 - ▶ an efficient way of determining with accuracy, over time, the actual incomes of former students;

Thank you for your attention
Questions and Comments