"ECONOMIC GROWTH, POVERTY AND INCOME INEQUALITY"

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by

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I. *INTRODUCTION*

Economic growth, poverty and income distribution are central, inter-related facets of much economic analyses and discussions about current trends in countries across the globe. Recent writings include Anthony B. Atkinson's "WIDER Annual Lectures 3 (1999) on the question: Is Rising Income Inequality Inevitable? A Critique of the Transatlantic Consensus, Francois Bourguignon's paper to the Indian Council for Research on International Economic Relations in 2004: "The Poverty-Growth–Inequality Triangle", Nancy Birdsall's WIDER Annual Lectures 9 (2005) entitled "The World is not Flat: Inequality and Justice in our Global Economy", and the World Bank's World Development Report 2006 on Equity and Development.

These writings constitute a rebirth of longstanding tradition in the discipline of political economy which can be traced to the time of Adam Smith. It was also certainly a feature of the work of Sir Arthur Lewis in whose memory this Conference is being held. Lewis in his Theory of Economic Growth and other writings extensively examined the determinants and the dynamics of economic growth on the premise that economic growth would alleviate poverty. For Lewis, writing in 1938, there could not have been "many places in the world which touch the depths of West Indian poverty or show so little progress." (Quotation in Tignor 2006, page 45). The challenge was how to achieve economic growth and reduce poverty. Lewis in much of his early writings analysed the role of savings and capital accumulation, education and technology, productivity and foreign trade, each of which is influenced by and influences income distribution. He also analysed the role of institutions which condition the working of markets, including in respect of income shares. (For a discussion of this latter aspect of Lewis, see Bourne and Attzs, 2005 pages 27-28).

In this Lecture, I deal with all three facets, i.e., economic growth, poverty and income distribution from a Caribbean perspective, drawing on both the data and empirical findings by various authors specific to the Caribbean as well as on a wider body of economic literature.

II. *ECONOMIC GROWTH AND POVERTY*

From 1985 to 2004, Caribbean economies generally achieved respectable economic growth. Commonwealth Caribbean countries depicted in Table 1 had as a group annual real GDP growth rates no less than 2.9% and expanded by as much as 5.7% in one sub-period. There were considerable variations among the economies with episodes of economic recession in some countries, relatively slower growth in some countries than in others, and a few instances of quite fast economic growth rates (9%-12%). Overall, however, the record for most countries is solid, moderate growth.

Despite the record of positive economic growth, poverty is a major problem in the Caribbean, even if one excludes the exceptionally acute case of Haiti. Surveys of Living Conditions conducted on the basis of country-specific basic consumption baskets and which define poverty levels in terms of individual or household ability to finance such baskets allow for a depiction of poverty in the Caribbean. The results for various years between 1999 and 2006 reported in Table 2 reveal that 10 of 15 countries have more than 20% of their population living below the poverty line, a further 4 countries with 10-19% below the poverty line, and one country with 9% below.

It should not be thought that no progress has been made. Where estimates exist, one can discern reductions in the incidence of poverty in several countries. In Jamaica, the poverty rate decreased from 29% in 1975 to 12.7% in 2005. In Guyana, it decreased from 43% in 1993 to 35% in 1999; in Trinidad and Tobago, from 21% in 1992 to 16.7% in 2005. In some instances the downward trend has not been smooth, for example, in the Bahamas where having decreased from 10.3% in 1970 to 3.3% in 1979, the poverty rate rose to 8.9% in 1993 and 9.3% in 2001. Overall, progress has been made but it has not been sufficient. Poverty is still a problem.

Poverty has multiple effects on economic growth. They include levels and standards of consumption inadequate for nutritional and physical health, [e.g., Pritchett and Summers (1996), Fogel (2004)], for safe and healthy living, for accumulation of knowledge and skills, for child care and protection and for advancement of the welfare of future generations. Furthermore, when poverty causes health problems and energy deficiency, it may contribute to irregular work and limited capacity for extended periods of work. Deficiencies in levels of education and training directly constrain productivity. In these various ways, human poverty may cause under-achievement of productivity and economic growth. There is thus a causal link running from poverty to economic growth.

There is also a causal connection from economic growth to poverty. Employment and incomes are lower during recessions than during growth episodes. Furthermore, Caribbean economies are volatile and this volatility contributes to poverty. Economic volatility causes fluctuations in employment and incomes, with particularly stronger influence on the employment and incomes of lower skilled workers. The poverty effects are magnified because poor people have weaker and less effective mechanisms for coping with loss of employment and income. The absence of personal coping mechanisms would not be so problematic if government-financed safety nets were adequate. This generally is not the case and the capacity to finance what exists is usually vitiated by slow economic growth or recessions.

It is likely that sustained increases in economic growth, if achieved, would reduce poverty in the Caribbean. Besley and Burgess (2003) illustrate that the Latin American and Caribbean region could halve its poverty rate by 2015 with a 3.8% annual growth rate of per capita national income. By the same token, the Commonwealth Caribbean countries would have to double the 1.5%-2.0% per capita growth rates achieved between 1990 and 2004.

III. *INCOME INEQUALITY*

The size distribution of income has intermittently attracted the attention of Caribbean scholars, e.g., Ahiram (1966) Dookeran (1981), Harewood (1978), Henry (1975), Handa and King (1997) and King and Handa (2000). Because of the sporadic nature of the reported computations of the size distributions of incomes, it is impossible to present a complete and fully accurate composite picture of inequality of personal incomes in the Caribbean. Moreover, one must be mindful that non-compliance with surveys is likely to generate biased estimates of inequality (Mistiaen and Ravallion 2003).

Intermittent estimates are available for Bahamas, Jamaica and Trinidad and Tobago from a variety of sources which report household incomes or individual incomes. For the 1957-1989 period, income inequality measured by Gini coefficients seems to have been considerable (See Table 3). In the Bahamas, the coefficient ranged between 0.44 and 0.52; in Jamaica, the range was 0.43-0.53; in Trinidad and Tobago, it was 0.43-0.51. Estimates available for the 1990-1999 period also indicate substantial income inequality but with the degree of inequality seeming to decrease in Trinidad and Tobago and to increase in Jamaica. What is also clear from additional data in Table 4 compiled by the Caribbean Development Bank is that income inequality persisted into the next decade as several countries had Gini coefficients between 0.31 and 0.48 during the 2000-2006 period.

Income inequality has its counterpart in consumption inequality. The World Development Report 2006 indicates consumption Gini coefficients of 0.42 for Jamaica in 2001, 0.44 for St. Lucia in 1995 and 0.39 for Trinidad and Tobago in 1992. In those three countries, the consumption expenditure of the 90th percentile was multiples of 5.9, 9.4, and 6.2 of the consumption expenditures of the 10th percentile. Similar levels of consumption inequalities have been reported for Jamaica by King and Handa (2000) who estimated Gini coefficients for household per capita expenditures moving from 0.44 in 1989 to 0.37 in 1997, and Ginis for adjusted household consumption expenditures moving from 0.36 in 1989 to 0.33 in 1993.

IV. *INCOME DISTRIBUTION, POVERTY AND ECONOMIC GROWTH*

Poverty is affected not only by economic growth but also by how the fruits of economic growth are distributed. Economic growth is itself affected by the distribution of national income.

The distribution of incomes can be approached in two ways. One way is in terms of its distribution into factor shares ie., between capital income (profits and interest, “profits” for convenience) and labour incomes (wages and salaries, “wages” for convenience). Factor income distribution is the focus of traditional theories of economic growth of which Lewis (1954), Kaldor (1955) and Passinetti (1962) are outstanding latter-day examples, but expressed by Adam Smith and David Ricardo previously. The second way of approaching income distribution is in terms of the size distribution of incomes, i.e. how income is distributed among individuals or households in an economy. This second way has a much longer tradition. Traceable to the Greek philosopher Plato, it is welfarist and ethical or philosophical in its orientation, but is now much in the ascendancy over the factor income distribution approach.

The link between factor income distribution and economic growth rests upon the proposition that capital accumulation drives economic growth and that the propensity to save out of wages is smaller than the propensity to save out of profits. Accordingly, the greater the proportion of income accruing to owners of capital, the higher the rate of accumulation and economic growth. Classical economists such as Smith and Ricardo maintained that only capitalists save. Lewis (1954, page 417-8) modified this proposition only slightly: "practically all savings is done by people who receive savings or rents ….(therefore)… the major source of savings is profits …" The Kaldor-Pasinetti model limits itself to positing differential savings propensities and acknowledges the two separate elements of decision-making about savings. One is a corporate decision to save out of profits. The other is a decision of individuals who own property as well as wage earners to save of personal incomes (see in particular Kaldor 1966). In the resulting aggregate savings and investment function, the investment rate is increased by profits being a larger share of national income provided that the propensity to save out of profits exceeds that of savings out of wages. It might be interesting to note that an empirical test on the factor income distribution effect I conducted on the Guyanese and Jamaican economies for the period 1953-1973 yielded the conclusion that they are economically significant differences in the propensities to save out of labour and property incomes (See Bourne 1986).

The factor distribution of income is obviously linked to the size distribution of personal incomes. Personal incomes include labour incomes, dividends and other forms of property income and income transfers. Because corporate equity and other earning assets are not uniformly distributed across individuals or households, earnings from property will influence the relative income shares of the poor and the non-poor, tilting the balance in favour of propertied individuals and households.

Inequality of personal incomes directly influences the level of poverty. The empirical work of Besley and Burgess (2003), for instance, came to the conclusion that in Latin America and the Caribbean one standard deviation change in income inequality would reduce poverty by 45%. More generally, Gottschalk (1997, page 23) states that "changes in the absolute incomes of those at the bottom are affected by the amount of economic growth, changes in inequality and changes in mobility." Francois Bourguignon (2004, page 2) is even more forceful. He points out that "poverty in a given country and at a given point of time is fully determined by the rate of growth of the mean income of the population and the change in the distribution of income." Thus he stresses that "It is important to consider growth and income distribution simultaneously, and to recognise that income distribution matters as much as growth for poverty reduction" (page 9). For Bourguignon, "the real challenge to establishing a development strategy for reducing poverty lies in the interaction between distribution and growth, and not in the relationship between poverty and growth on the one hand and poverty and inequality on the other, which are essentially arithmetic." (page 2). For Londoño and Székely (1997, page 21), "it seems quite obvious that poverty in Latin America and the Caribbean is to a large extent a distributive problem."

Connections between the size distribution of personal incomes and economic growth had not gone unnoticed by earlier scholars. Lewis' Theory of Economic Growth (2003, page 182) contains the statement that: "Many underdeveloped countries, awakening in the middle of the twentieth century to a strong desire for economic development, are embarrassed by what it seems to require in terms of inequality of income … These, however, are part of the cost of development." Lewis in this context is positing "income differentials" as an instrumentality of economic growth. Kuznets (1955) and others postulate that the temporal course of income inequality is the outcome of economic growth in a multi-sector economy characterised by sectoral differences in income distribution (See for instance Robinson 1976). The Kuznets inverted U, which describes a process by which income distribution worsens in the early period of growth and then improves, is by no means universally validated but continues to have appeal and to garner theoretical support. For instance, the Aghion and Bolton's theory of Trickle-down Growth and Development (1997) which combines capital market imperfections, capital accumulation and long-run wealth distribution to generate a kind of Kuznets curve.

Contrary to the slant of Lewis and Kuznets, contemporary scholars have sought to establish a positive relationship running from the size distribution of income to economic growth. One strand of the literature identifies income distribution as improving the allocative efficiency of capital. If the poor have higher returns to investment opportunities than do the rich but are prevented from realising those investments by wealth constraints, redistribution from the rich to the poor would raise the aggregate rate of return to capital. Another strand identifies enhanced financial capacity for personal investment in human capital i.e., in education and training. The overall improvement in human capital facilitated by greater income equality would improve productivity and economic growth. Yet another strand of the literature speaks to the growth-retarding effects of social tensions and political instability caused by income inequalities.

V. *THE SIZE DISTRIBUTION OF EARNINGS*

A.B. Atkinson (1997) quotes Alan Blinder as writing: "If you want to understand the rise in income inequality … the place to start is with the rise in wage inequality." Atkinson (page 22), notes, however, that because household incomes include components other than earned income "there is no reason to expect dispersion of disposable household incomes to follow slavishly dispersion in individual pre-tax earnings." Point taken; but especially in economies in which earned income is a large part of income for many people, there is value in paying attention to the distribution of earned income.

Data for Trinidad and Tobago reveal substantial inequality of earned incomes. The Gini coefficients estimated with data from the Central Statistical Office and reported in Chart 1 are typically between 0.44 and 0.47 for the 1998-2006 period. More insights can be had from an examination of decile shares. Chart 2 shows the wide gap between the real per capita incomes of the top quintile and the bottom quintile as well as the gap with the median real per capita income. While the real per capita incomes of the top quintile maintained an upward trend, real per capita incomes of the median have trended downwards. The bottom quintile experienced steadily increasing real per capita incomes. In essence, the middle has shrunk over time. Chart 3 depicts the income share relativities. The share of the top decile is 17 times that of the bottom decile in 1998 and 11 times in 2006. The top quintile received close to 4 times the share of the bottom quintile in 1998 and 3 times in 2006. There is a discernible tendency for earned income inequality to decrease in this period of relatively strong economic growth.

The sectoral patterns are also interesting. In the later years, earned incomes are more equally distributed in the sugar and other agriculture sectors and in the construction sector than in other sectors whose distributions more closely mirrored the economy-wide distribution [Charts 4 (a) to (c)]. The picture at the start of the period was somewhat different. Inequality was more pronounced in the petroleum and natural gas sector, the electricity sector and the financial sector compared to the other sectors. The turning point in the sectoral pattern of inequality seems to have been 2000/2001 when the Gini for petroleum and natural gas, electricity and finance peaked and when the Ginis for sugar and other agriculture, and construction rose sharply. A basic point may be made in light of the patterns and trends described. Namely, inequality of earned incomes on an economy-wide basis is determined by the mean incomes of sectors, income dispersion within sectors, and by the relative shares of the sectors in the total employed labour force.

The dispersion of earned income is also the outcome of the characteristics of labour markets, such as occupation, education, experience and risk. Thus Adam Smith in the Wealth of Nations (Book 1, Chapter X) identifies five principal circumstances contributing to inequalities in labour income. The wages of labour

1. "vary with the ease or hardship, the cleanliness or dirtiness, the honourableness or dishonourableness of the employment." (He also commented that honour makes a great part of the reward of all honourable professions. Perhaps the academic community will agree);

2. will vary with the easiness and cheapness, or the difficulty and expense of learning the business … the difference between the wages of skilled labour and those of common labour is founded upon this principle."

3. "vary with the constancy or inconstancy of employment", i.e, job stability and regularity of employment.

4. "vary according to the small or great trust which must be reposed in the workers."

5. "in different employments, vary according to the probability or improbability of success in them."

It is now standard to recognise that there are premia paid for skills, education and knowledge which drive wedges between the wages of various categories or skill levels of workers. In a simple demand and supply for labour framework, an increase in the demand for 'skilled' labour relative to 'unskilled' labour will raise the skill premia if there is less than proportionate supply adjustment, thereby increasing income inequality. Underlying skills premia are differences in factor productivities which themselves are determined by relative factor supplies and technology. Technical change alters the demand for relative labour by changing relative productivities. Technical change implemented through changing the production technologies for existing product lines or through introducing new product lines which require different technologies, shifts the relative demand for skilled and unskilled labour.

Additionally, sectoral shifts, as a feature of economic growth, will more likely generate an increased relative demand for skilled labour which in situations of factor supply limitations typical of developing countries, increases the premia for skilled labour, thereby increasing inequality of earned incomes, at least initially. This is a point addressed by Lewis (2003, page 180): "Economic growth makes enormous demands for skills of many kinds. It is associated with a great increase in specialisation, and therefore in a range of skills … the middle classes … grow rapidly, relatively to all others… In this process, the differentials between skilled and unskilled, literate and illiterate, supervisory and supervised tend to widen."

There is an empirical basis for drawing some inferences about labour market influences on inequality of labour income in the Caribbean. Firstly, the data for Trinidad and Tobago show considerable income differentials across occupations [Charts 5 (a)-(c)]. The highest mean incomes are received by "professionals," followed by "legislators, senior officials and managers" and "technicians." The lowest mean incomes are received by workers in "elementary occupations," "service" workers, and "agriculture and related" workers in descending order. The highest paid occupational category receives four times the average income of the lowest paid category.

Second, the correspondence between educational attainment and occupational category is strong. Whereas a very high proportion of the highest paid category are university graduates, e.g. 83% in 2002, there are actually no university graduates among the four lowest paid categories. The middle pay categories have high proportions of successful secondary school graduates whereas the four lowest paid have small proportions. One can conclude, therefore, that income differentials, i.e, a kind of education premia, are at work.

Third, there are indications of fractal inequality i.e, dispersion within groups or categories. Dispersion rates measured by Gini coefficients are not uniform across the occupational categories. Between 1998 and 2000, more inequality is evident within the "professional" category, "legislators, senior officials and managers" and "technicians" than within the other occupational categories [Charts 6(a)-(c)]. After 2000, the pattern shifted with a sharp reduction of inequality within the "professionals" and "legislators – managers" categories and a less pronounced fall in the technician category. The degree of inequality in the first two categories rose subsequently but has not regained pre-2000 levels. Inequality continued to decrease in the technician category. All other categories experienced an increase in income inequality after 2000.

As the relative supply of skilled labour expands through investment in human capital, the differential would be expected to decrease. Lewis and Adam Smith are at one in their belief in the long-run tendency towards equality of labour incomes. Thus Smith (Book 1, chapter X says: "the whole of the advantages and disadvantages of the different employment of labour…….must, in the same neighbourhood be either perfectly equal or continually tending to equality," while Lewis (2003, page 181) says: "The situation…(with the differentials)…. rights itself as the spread of educational facilities begin to increase the flow of people with superior training. As the supply increases, the differentials are reduced." Lewis also notes that high differentials stimulate technical change which increases the elasticity of substitution of low skilled for highly skilled labour which also reduces the skill premia.

Labour market operations can be attenuated by several factors common in contemporary economies. One is capital market imperfections, a particular manifestation of which is restricted access to credit by low income households which then constrains their ability to improve their human capital. Caribbean financial markets are not perfect and instead exhibit symptoms of credit rationing. It is likely therefore that in the absence of other forms of financial provisioning to would-be private investors in education and training, capital market imperfections would have constrained the upward mobility of low skilled workers. A second factor is wealth – both initial and inherited – which provides capacity for investment in oneself and one's offspring thereby conferring labour market advantages. A third factor is trade union bargaining. Trade unions to the extent that unionised establishments have more compressed wage structures than non-unionised establishments will tend to reduce earnings inequality. However, trade unions can also be a disequalising force in the wider national context through advancing the wages of unionised workers versus non-unionised workers. A fourth factor is government labour market regulations, especially through minimum wages which are equalizing factors if effective. Strobl and Walsh (2003) cast doubts on the efficacy of minimum wages in the Caribbean by reporting a less than 40% compliance for the Trinidad and Tobago workforce in 1996-1998.

Public sector employment can itself be an additional equalizing factor insofar as government is a large employer as is the case in the Caribbean and government adopts a policy of wage structure compression for its employees.

Social customs and norms are other influences on wage outcomes. Atkinson (1997, page 310-311) notes that "Supply and Demand only places limits on the possible wage differentials with other factors such as social norms determining where between these limits wages actually lie." But "as more people are remunerated outside the conventional norms, so adherence to these norms becomes weaker or the socially acceptable norms widens."

VI. *CAPITAL GAINS*

Because corporate capital is unequally distributed, it is likely that capital gains accrue mainly to persons at the top of the size distribution of incomes. The growth of mutual funds which allow for small indirect equity participation has given other income groups opportunity to share in capital gains but inequality in earned incomes would restrict the proportionate investment of those below the median in mutual funds. For illustrative purposes, I present a chart (chart 7) on capital gains in Trinidad and Tobago between 1998-2006 and relate them to the income shares of the upper and middle quintiles of earned income recipients. The relationship is more suggestive of further work to be done than conclusive of the effect of capital gains on the size distribution of incomes.

VII. *TOLERENCE OF INEQUALITY AND POVERTY*

The notion of norms and social customs addressed previously raises the issue of what levels of inequality and poverty might be acceptable in the Caribbean. As Lewis (2003, page 429) recognised, acceptability does not rest solely on the objective outcomes of market processes: "reasonable differentials are those salaries or profits which are objectively necessary in the situation to secure the required supply of skill or initiative. (But)….what is 'reasonable' on the basis of this test may well be 'unreasonable' by some other standard of merit or social justice."

Merit and justice are themselves philosophical concepts of considerable complexity. (See for instance John Rawls 600 page A Theory of Justice published in 1972 and the numerous papers spawned by it.) Amartya Sen (2000) has pointed to the contingent nature of merit, ie. merit can be viewed either in terms of the outcome of actions (a "result perspective") or in terms of the propriety of actions (independent of results). The contingent nature of merit, as Sen observes, would indicate that "its relationship with economic inequality would depend very much on whether an aversion to economic inequality is included in the objective function of the society."

However manifested in political terms, it is clear that modern society should not accept that the poor shall be with us always. Furthermore, Hirschman (1973) makes the point that tolerance for inequality is conditional upon expectation of personal advancement, of not being absolutely left behind, and that such tolerance may turn into deviant behaviour if expectations are unrealised. Mighty Sparrow's statement that "necessity knows no laws," and Jimmy Cliff's declaration "I have got to use what I got to get what I need" are expressions of limits of tolerance and hints at the nature of the instrumentality of redistribution. More generally, Plato in the Laws written in the historical context of the Greek city state was absolutely clear that "if a state is to avoid ….civil disintegration …extreme poverty and wealth must not be allowed to rise in any section of the citizen-body because both lead to disasters."

Matters have not got to the disastrous point in the Caribbean. One would be hard-pressed to argue, nonetheless, that crime is not causally connected with poverty and income inequality (Bourguignon 1999, World Bank 2007). It may also be the case that conspicuous consumption by wealthy residents and the demonstration effect of high life of rich Western industrialised countries have so raised consumption aspirations that “wants” rather than “basic needs” are what motivate crime against property.

VIII. *THE WAY FORWARD*

Lewis in The Theory of Economic Growth (2003, page 182) recommends that “the most effective remedy …..(for inequality of earned incomes) … is to multiply as rapidly as possible the skills on which development makes acute demands, since this both hastens the possibilities of development and also keeps at a minimum its cost in inequality.” The distinguished Swedish Economist Assar Lindbeck (1998) provides a more detailed listing of ways by which economies can reconcile economic efficiency and income inequality. I provide comments on them in a Caribbean context.

1. Institution of minimum wages policy. As pointed out previously, however, non-compliance can render minimum wages an ineffective instrument for income equality. Furthermore, minimum wages can adversely affect the employment prospects of low productivity workers.

2. Provision of education and training opportunities. In the Caribbean this must mean not only the expansion of facilities but improved access to education and training through expanded public financing and by making credit by households more accessible.

3. Differential tax-expenditure treatment of low income households and individuals to increase their disposable income and capacity to accumulate assets. For the Caribbean, this would mean lower tax rates and greater tax waivers at the lower end of the pre-tax income distribution and targeted explicit or implicit income transfers.

4. Public sector employment. This has proven to be inefficient in the Caribbean. Public sector payrolls have been bloated with no commensurate increase in the

quantity and quality of public services and with damaging consequences for fiscal sustainability.

5. Equalising capital-income distribution. This can be done through effecting a more even distribution of capital assets. In the Caribbean, the creation of unit trusts and similar mutual funds, public divestment of state-owned enterprises and encouragement of public listing by privately held companies are steps in the right direction.

Undoubtedly, there are other policies and actions that can be taken to deal with the twin problems of poverty and income inequality. Moreover, implementation of policies is often easier in times of economic growth than in times of stagnation. What is essential is that reliance not be placed exclusively or even mainly on trickle-down effects in the short run. It seems necessary that poverty and income inequality be dealt with directly and quickly.

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Attachments

Table 1. Annual Percentage Changes in Constant Price GDP: Period Averages

Country	1985-1989	1990-1994	1995-1999	2000-2004	1985-2004
Anguilla	12.3	5	5.5	3.9	6.7
Cayman Islands	9.5	6.2	6	1.2	5.7
Turks & Caicos	n.a.	8.3	7.2	n.a.	7.8
Monsterrat	7	0	-14.3	n.a.	-3.7
Antigua & Barbuda	8.3	3.4	4	3.1	4.7
Dominica	4.3	3	2.2	-1	2.1
Grenada	5.5	1.9	4.9	0.4	3.1
St. Kitts & Nevis	7.1	3.9	4.3	2.8	4.5
St. Lucia	9.3	2.9	2.2	2.7	4.3
St. Vincent & Grenadines	6.8	2.8	4.4	2.9	4.2
The Bahamas	n.a.	n.a.	4.4	2.9	4.7
Barbados	3.2	-1.1	3.4	1.4	1.7
Belize	6.9	5.7	3.5	7.3	5.9
Guyana	3.1	6.9	4.1	1.4	3.9
Jamaica	2.6	2.1	0.4	1.3	1.6
Trinidad and Tobago	-3.3	1.1	7.1	9.4	3.5
Arithmetic Mean	**5.7**	**3.6**	**3.1**	**2.9**	**3.8**

Source : Computed by author

Table 2. a. Poverty Indicators for Selected Caribbean Countries

Country	Year	% Below Poverty Line
Anguilla	2002	23
Antigua & Barbuda	2006	18.4
Bahamas	2001	9.3
Barbados	1997	13.9
Belize	1996	33
	2002	33.5
British Virgin Islands	2002	22
Dominica	2002	39
Grenada	1999	32.1
Guyana	1993	43
	1999	35
Haiti	1997	65
Jamaica	1993	24.4
	1997	19.9
	2002	19.7
	2004	16.9
	2005	12.7

Source: Caribbean Development Bank

Table 2. b. Poverty Indicators for Selected Caribbean Countries (Cont'd)

Country		Year	% Below Poverty Line
St. Kitts & Nevis	(St.Kitts)	2000	30.5
	(Nevis)	2000	32
St. Lucia		1996	25.1
		2006	28.8
St. Vincent & the Grenadines		1996	37.5
Trinidad and Tobago		1992	21.2
		1997	24
		2005	16.7
Turks and Caicos Islands		1999	25.9

Source: Caribbean Development Bank

Table 3. Income Inequality in the Caribbean: Gini Coefficients from 1957-99

		Bahamas	Jamaica	Trinidad & Tobago
Early Period	1957/58	n.a.	0.53	0.43
	1970	0.472	0.453	n.a.
	1971/72	n.a.	n.a.	0.514
	1973	0.441	n.a.	n.a.
	1975/76	0.523	0.456	0.453
	1979	0.422	n.a.	n.a.
	1986	0.442	0.431	n.a.
	1988/89	0.391	0.433	n.a.
Later Period	1990	0.409	0.418	n.a.
	1991	0.409	0.411	n.a.
	1992	0.408	0.382	0.420
	1993	0.45	0.379	n.a.
	1994	n.a.	0.382	n.a.
	1995	n.a.	0.362	n.a.
	1996	n.a.	0.36	n.a.
	1997	n.a.	0.416	0.39
	1998	n.a.	0.372	n.a.
	1999	n.a.	0.37	n.a.

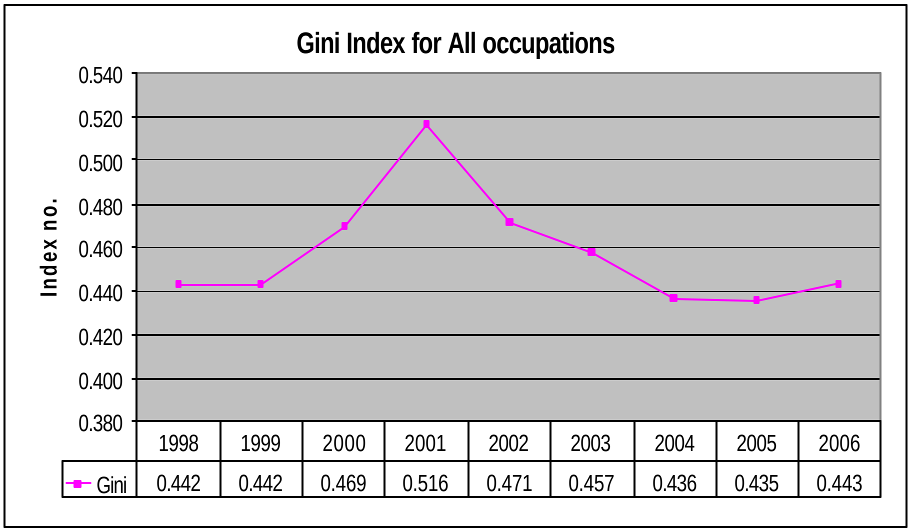
Source: Ahiram (1966), Dookeran (1981), Harewood (1978), Henry (1975), Londano & Szekely (1997)

Table 4. Estimates of Gini Coefficients by Country
1996-2006

Country	Year	Gini Coefficient
Anguilla	2002	0.31
Antigua and Barbuda	2006	0.48
Bahamas	2001	0.57
Barbados	1997	0.39
Belize	2002	0.4
British Virgin Islands	2002	0.23
Dominica	2002	0.35
Grenada	1999	0.45
Jamaica	2002	0.4
St. Kitts	2000	0.39
Nevis	2000	0.37
St. Lucia	1996	0.5
	2006	0.42
St. Vincent & the Gren.	1996	0.56
Trinidad & Tobago	1997	0.39
Turks and Caicos Islands	1999	0.37

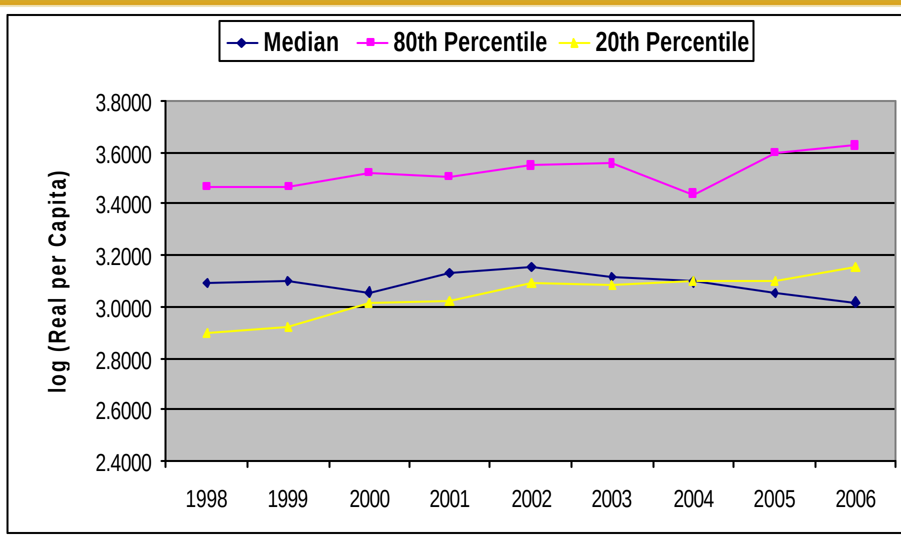
Source: Caribbean Development Bank

Chart 1. Trinidad and Tobago Earned Income Gini Coefficients 1998-2006 All Occupations



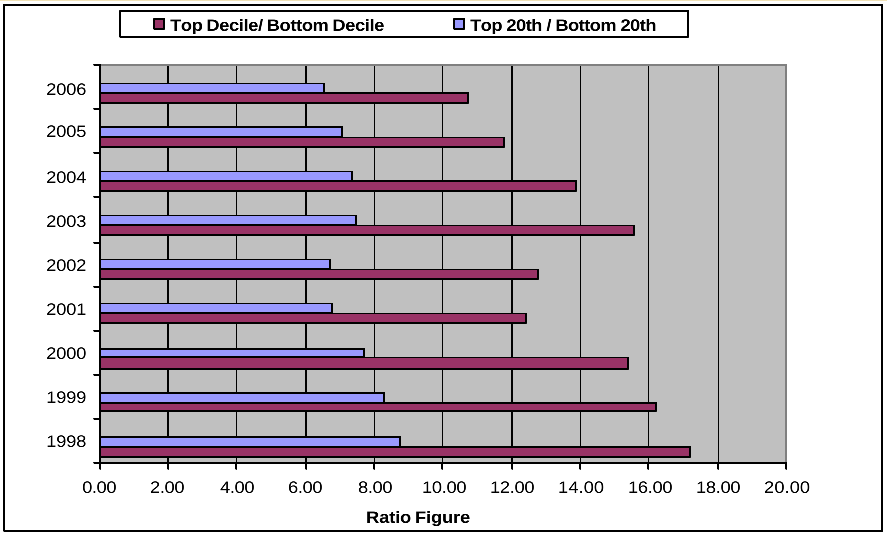
Source: Constructed by Author

Chart 2. T&T Log Trends of Real Per Capita Incomes



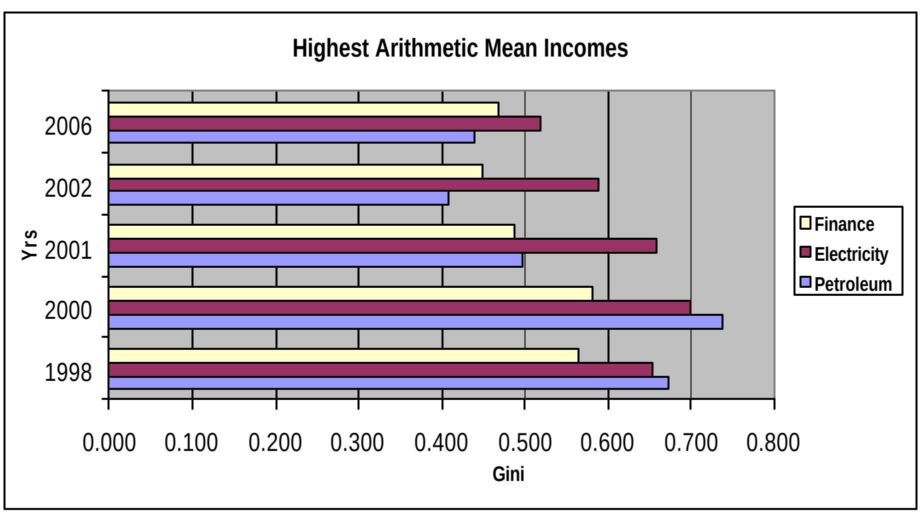
Source: Constructed by Author

Chart 3. T&T Decile Income Share Relativity 1998-2006



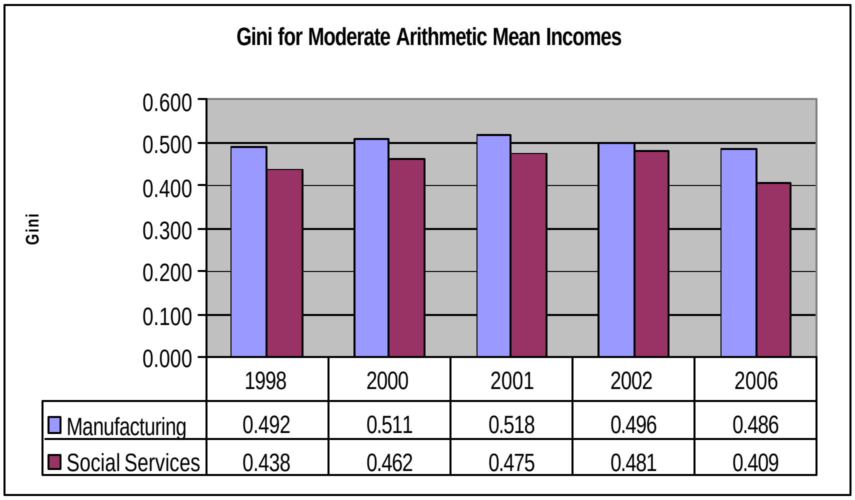
Source: Constructed by Author

Chart 4 a. T&T Earned Income Gini Coefficients by Sector (High Income)



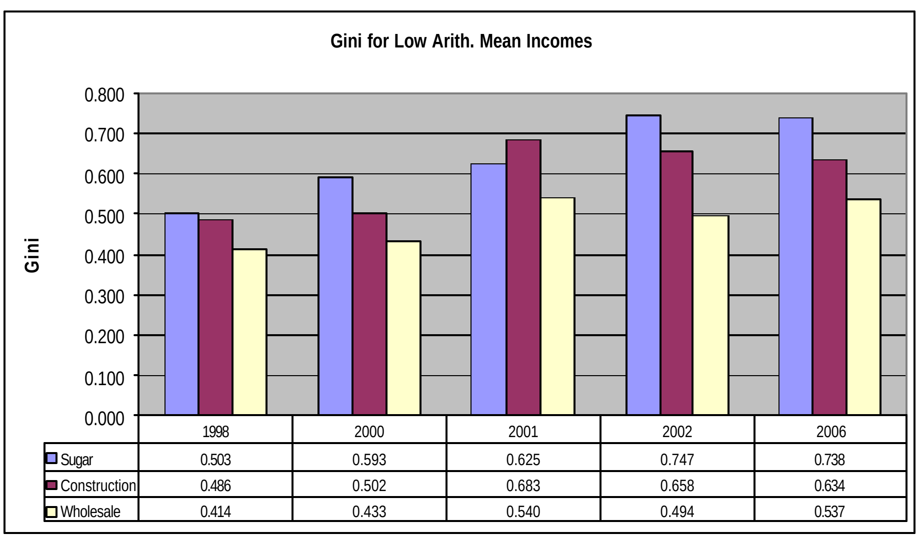
Source: Constructed by Author

Chart 4 b. T&T Earned Income Gini Coefficients by Sector (Middle Income)



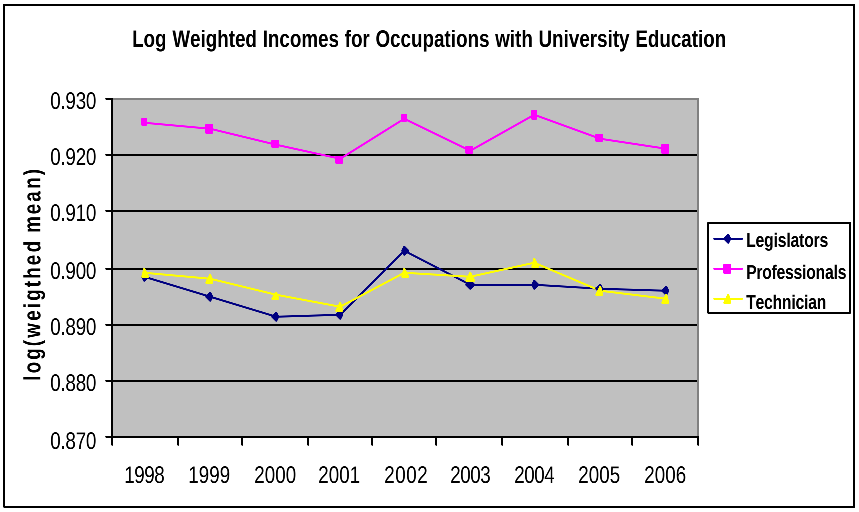
Source: Constructed by Author

Chart 4 c. T&T Earned Income Gini Coefficients by Sector (Low mean Incomes)



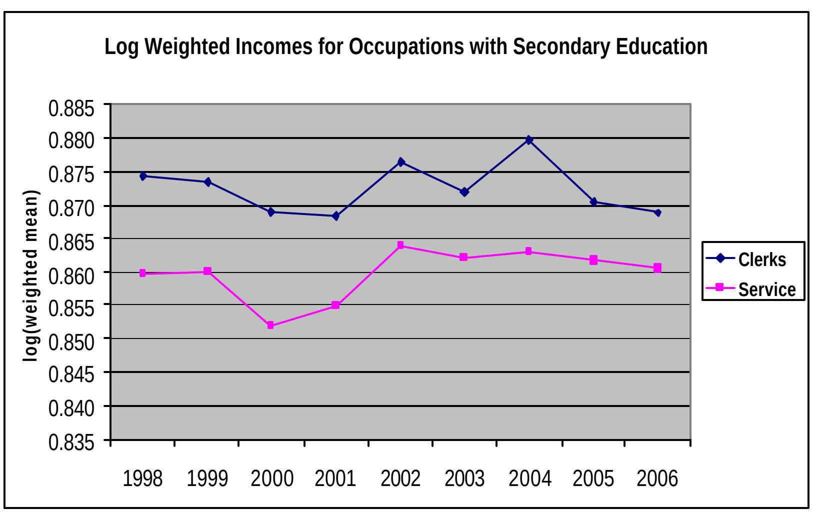
Source: Constructed by Author

Chart 5 a. T&T Log of Weighted Mean Incomes for Occupations 1998-2006 (University Edu.)



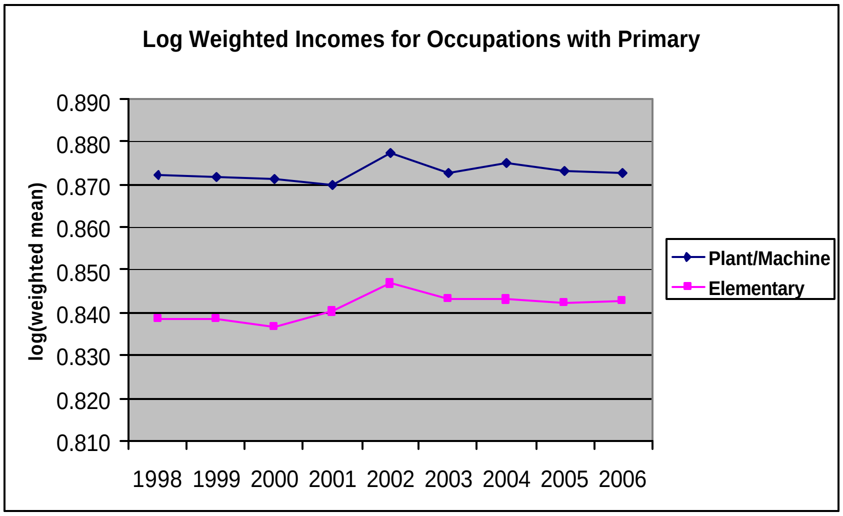
Source: Constructed by Author

Chart 5 b. T&T Log of Weighted Mean Incomes for Occupations 1998-2006 (Secondary Edu.)



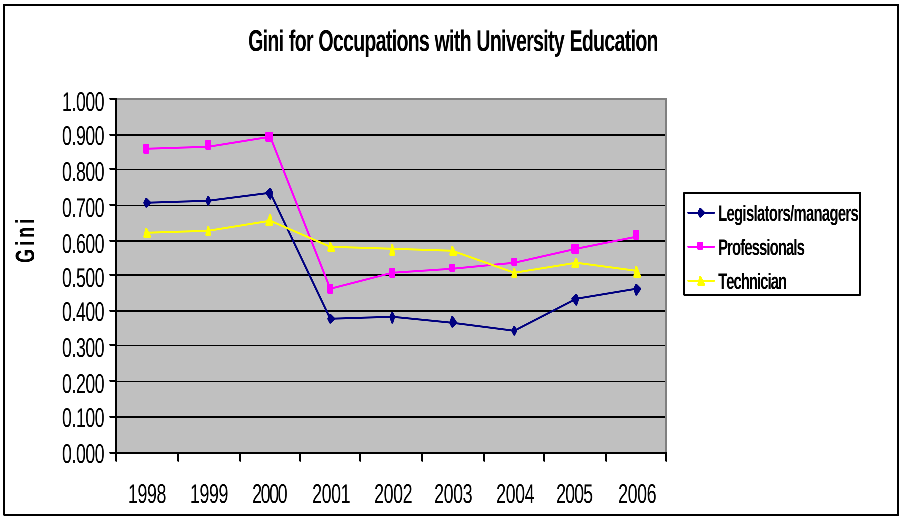
Source: Constructed by Author

Chart 5 c. T&T Log of Weighted Mean Incomes for Occupations (Primary Edu.) 1998-2006



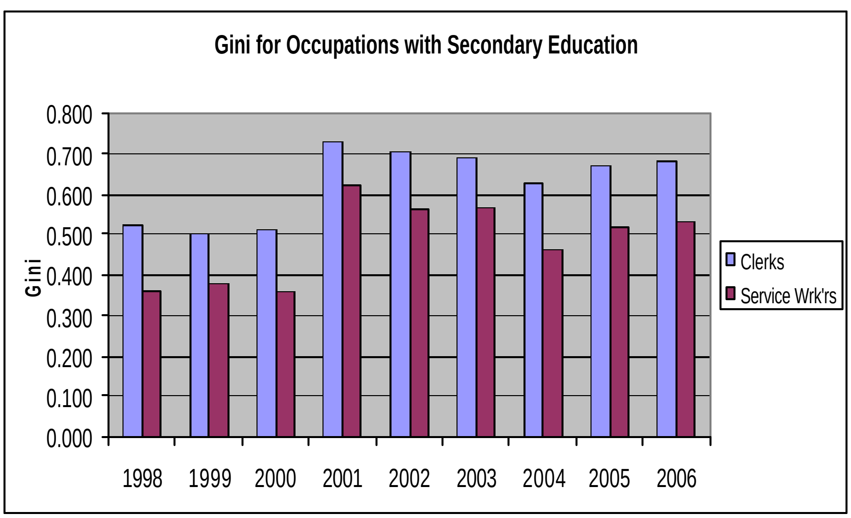
Source: Constructed by Author

Chart 6 a. T&T Earned Income Gini Coefficients by Occupations 1998-2006 (University Edu.)



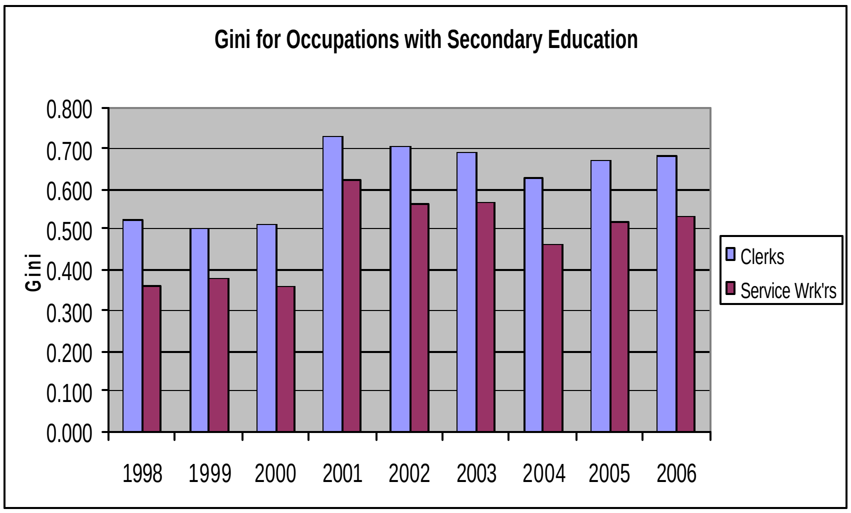
Source: Constructed by Author

Chart 6b T&T Earned Income Gini Coefficients by Occupations 1998-2006 (Secondary Edu.)



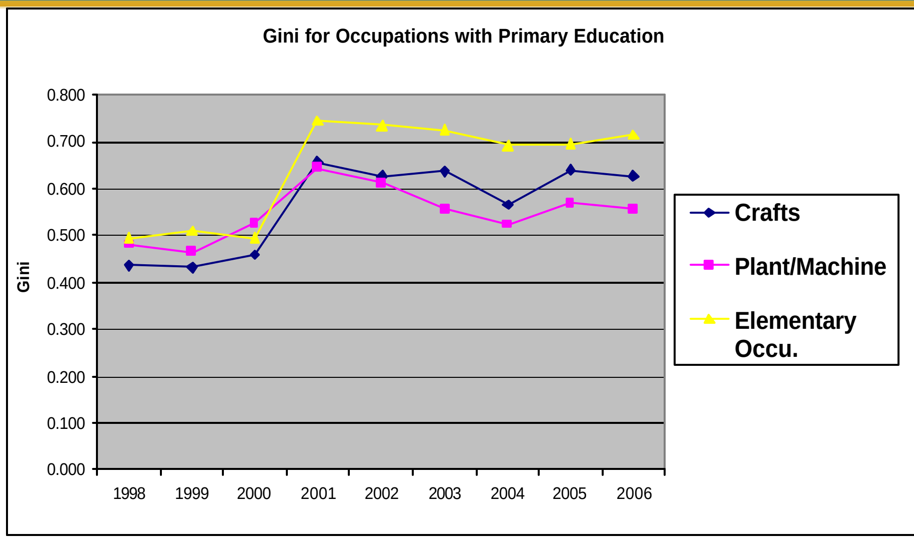
Source: Constructed by Author

Chart 6b T&T Earned Income Gini Coefficients by Occupations 1998-2006 (Secondary Edu.)



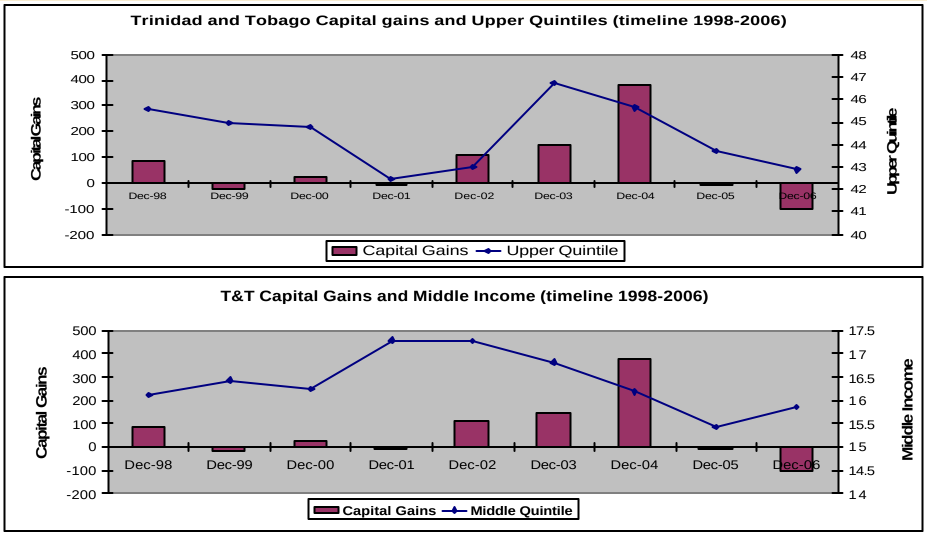
Source: Constructed by Author

Chart 6c T&T Earned Income Gini Coefficients by Occupations 1998-2006 (Primary Edu.)



Source: Constructed by Author

Chart 7. T&T Capital Gains Plotted with the Upper & Middle Quintiles' share of Total Income



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