REBASING OF THE QGDP INDEX

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Introduction

The Central Bank acknowledges the Central Statistical Office (CSO) as the official source of national accounts statistics. These statistics are compiled annually and made available to the public in the Government's "Review of the Economy". While these statistics are very useful in measuring the economic performance of the economy in the long term they do not allow for short run economic analysis. In recognising the need to provide timely and accurate information on the growth in output, the CBTT developed a quarterly real Gross Domestic Product Index. In the absence of nominal quarterly GDP figures, this index provides indicators on the growth of output on a quarterly basis to assist policy makers with measuring short term economic performance.

This Index is a base weighted Laspeyres quantity index, which is defined as a weighted arithmetic average of quantity relatives with weights reflective of the base year value added. It was first published in the Quarterly Economic Bulletin of September 1987 with the year 1982 = 100 and rebased in 1990 to the year 1985 = 100. The Index was rebased to the year 2000 = 100 in 2004.

In order to maintain its relevance, it is important that the QGDP Index be rebased periodically, since structural and technological changes occur in the economy over time and an unchanged base year will not be able to fully capture the changes in the economy. In fact, international convention recommends that rebasing should be undertaken every 5 to 10 years. It has been fourteen years since the last rebasing exercise and since then the economy of Trinidad and Tobago (T&T) has undergone several structural changes. Prominent among the changes is the liberalization of the financial system and the change in the exchange rate regime (from a fixed to a flexible regime). Further, the petroleum sector has become more dominant, and also more diversified than twenty years ago incorporating natural gas, LNG and petrochemicals (ammonia, urea and methanol) in addition to oil. Also, there has been a significant shift in the relative importance of several sub-sectors in the non-energy sector such as distribution, finance, insurance, real estate and business services, government and manufacturing to a lesser extent.

In addition, rebasing enables improvements to be made to coverage and data sources as well as inclusion of methodological enhancements due to new and emerging activities.

This paper gives a synopsis of the rebasing process with emphasis on the likely effects of rebasing on growth rates. The first section summarizes the reasons for the selection of 2000 as the new base year. Section II discusses the weighting methodology while the effects of rebasing are explored in Section III. The paper concludes with a comparison of the methodologies used by the CSO and Central Bank.

I. Choice of Base Year

The choice of the base year is a critical element of the rebasing exercise and the year selected should be characterized by relative economic stability. In addition, international convention recommends that the base year selected should end with zero (0) or five (5) for easier comparative analysis.

The following are the major reasons for selecting the year 2000 as the base year.

- Firstly, to enable comparisons with other rebased series at the international level, the year 2000 was selected.

- Secondly, and more importantly, the year 2000 represented one of relative economic stability in T & T. An examination of economic development during this period, suggests that the main economic indicators performed well. The economy continued to register positive growth along with low and stable inflation, exchange rate stability, declining unemployment and favourable fiscal and external balances as a result of increased commodity prices. Although commodity prices such as oil prices increased in 2000, the prices in the ensuing years remained close to that in the base year. Table 1 highlights the trends in some selected economic indicators.

- The year 2000 marked the first full year of LNG production, following the start up of the first LNG plant in 1999.

- The official national accounts statistics produced by the CSO were also rebased to 2000. This allows for comparison with the rebased CSO estimates.

II. Weighting Pattern

Since international convention recommends that weights be valued at market prices, the new weights of the QGDP Index were computed using current value added at market prices. The previous rebasing exercise was undertaken approximately 14 years ago and those weights were derived using value added at current 1985 factor cost[2]. According to the System of National Accounts (SNA) 1993 there is a conceptual difficulty with gross value added at factor cost since there is no observable vector of prices such that gross value added at factor cost can be obtained directly by multiplying the price vector by the vector of quantities of inputs and outputs. By definition, "other taxes or subsidies on production" are not taxes or subsidies on products that can be eliminated from the input and output prices. Gross value added is not strictly a measure of output but a measure of income.

As a consequence, the new weighting pattern will be influenced not only by the prices prevailing and the volumes produced in 2000 but also by the change in valuation from factor cost to market prices.

Table 2 compares the current weighting pattern with those of previous base years. The energy sector has become even more dominant in the economy today when compared with 14 years ago and is more diversified. The overall weight for the sector stood at 317.5 parts per 1000 in 2000 compared with 267.8 parts per 1000 in 1985, 270.2 parts per 1000 in 1982 and 229.9 parts per 1000 in 1970. The economy has evolved into a gas-based one, as natural gas production has outstripped crude oil production, so much so, that by 2000 natural gas production (in barrels of oil equivalent) was more than twice that of crude oil production. Despite this trend, the weight for the sub-industry Exploration and Production, which includes both natural gas and oil production is lower in 2000 with a weight of 176.4 parts per 1000, than in 1985 when that sub-industry comprised only crude oil production but had a much higher weight of 218.2 parts per 1000. This is as a result of the increase in relative importance of the Petrochemicals sub-sector and the advent of LNG.

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[2]   See SNA 1993, pp 154. Gross value added at factor cost is a measure of income and not output.

The weight of the Petrochemical sub-sector almost tripled in 2000 to 47.1 parts per 1000 compared to 15.8 parts per 1000 in 1985, due to the increase in the number of ammonia and methanol plants over the last several years. The number of these plants has grown from 3 ammonia plants and 1 methanol plant in 1985 to 8 ammonia plants and 5 methanol plants in 2000.

In addition, economic activity in the energy sector was boosted by the commencement of LNG production. The first plant was commissioned in 1999 and by mid-year 2003, three such plants existed with a fourth train scheduled for completion by October 2005. The value added of the LNG sub-sector contributed 2.8 per cent to GDP in 2000 and has a weight of 27.9 parts per 1000.

The increase in the relative importance of the energy sector in 2000 implied that the non-energy sector declined in relative importance. However, on a sectoral basis, the changes in relative importance among the sub-sector that comprise non-energy sectors were mixed. There were reductions in the weights of the Agriculture, Government, Construction, Transportation, Storage and Communication, Electricity and Water and Other Services sectors while, those of Manufacturing, Distribution, Finance and Real Estate and Business Services showed marked increases.

The Manufacturing sector showed some improvement as the weights increased to 76.0 parts per 1000 in 2000 compared with 66.5 parts per 1000 in 1985. The weights of the following sub-industries rose: food, drink and tobacco, printing, publishing and paper converters, chemicals and non-metallic minerals and miscellaneous manufacturing. In particular the food, drink and tobacco sub-sector reflected the largest increase as the weight rose to 33.6 parts per 1000 from 27 parts per 1000 in 1985, indicative of penetration into export markets in the region and further abroad, while, the weight of the sub-industry assembly type and related industries declined from 13.2 to 10.7 parts per 1000 reflecting the loss in competitiveness.

Further, the Distribution sector increased remarkably in relative importance as the weight expanded to 177.5 parts per 1000 in 2000 from 59.2 parts per 1000 in 1985 at factor cost. Some of this improvement may be attributed to the fact that some manufacturing firms (assembly type and related industries) that could not weather the storms of international competition switched their activities to distribution. However, the increase in this sector was less sharp when compared with the weight at 1985 market prices. The divergence in the weight at market prices and factor cost in 1985 would have resulted from the large indirect taxes faced by this sector.

The Finance, Insurance, Real Estate and Business sector also increased in relative importance. The weight of this sector grew to 101.7 in 2000 from 74.7 in 1985 after adjusting for Financial Intermediation Services Indirectly Measured (FISIM). The activities of this sector have expanded significantly following the liberalization of the financial system and the elimination of exchange controls with institutions offering a wider range of financial products to a larger clientele domestically, regionally and internationally.

By contrast, the Agriculture sector diminished in relative importance in 2000 as the value added in all three sub-categories shrunk. In the case of domestic agriculture, the weight receded to 8.2 parts per 1000 in 2000 from 26.8 parts per 1000 in 1985. The weight for export agriculture contracted to 0.5 parts per 1000 in 2000 from 2.2 parts per 1000 in 1985 while the weight for sugar weakened to 8.2 parts per 1000 in 2000 from 18.8 parts per 1000 in 1985. As a result, the weight for Agriculture stood at 16.9 parts per 1000 in 2000 compared with 47.8 parts per 1000 in 1985. The weight of the agriculture sector was affected by valuation change from value added at factor cost to value added at market price since the sugar industry was heavily subsidized. The fall-off in the weight is seen to be less when compared to the weight based on value-added at 1985 market prices, which stood at 24.3. The output of the Agriculture sector has been plagued by many factors. These range from adverse weather conditions, soil erosion, praedial larceny, diseases and restructuring of the state owned enterprise CARONI (1975) Ltd. which led to its eventual closure in 2003 (a new company was formed in its place, The Sugar Manufacturing Company Limited).

Further, the weight in the Electricity and Water sector showed a marked decline when compared with the 1985 weight at factor cost but an increase when compared to the 1985 weight valued at market prices. This is reflective of the fact that this sector was subsidized.

In 2000 the weight of the sector fell to 18.0 parts per 1000 from 25.4 in 1985 at factor cost.

There was also a significant decline in the relative importance of construction sector. The weight of this sector decreased from 110.9 parts per 1000 in 1985 to 74.9 parts per 1000 in 2000. This can be attributed to the slowdown in construction activity following the completion of several major energy projects.

Transport, Storage and Communication declined in relative importance as the weight fell to 90.2 parts per 1000 from 115.3 parts per 1000 in 1985. However, when compared to the weight of 1985 market prices the weight remained unchanged.

The weight of the Government sector decreased from 152.3 parts per 1000 in 1985 to 78.6 parts per 1000 in 2000 as a result of the rationalization of the public sector and reflects government's current role in the economy today as facilitator of economic growth and development.

The importance of the Other Services sector waned as the weight of this sector fell from 80.1 parts per 1000 in 1985 to 48.7 parts per 1000 in 2000. This was on account of the fall in the value added of the Education and Personal Services sub-sectors.

III. Effects of the Rebasing

The effects of rebasing on the historical GDP growth rates may be grouped into three categories: the first from rebasing (includes changing the base year weights and base year), the second from methodological changes (includes the adoption of new quantum indicators or extrapolators and wider coverage of sectors) and the third from the change in seasonal factors. This paper highlights only the effect from re-weighting. *It is important to note that once the Index is rebased the history of the economy's growth trajectory will be rewritten.*

According to Allen (1975), rebasing may lead to either a downward or upward revision of past growth rates. The outcome depends on the correlation between existing prices in the current and base years and the change in volume indicators in the period under review. Rebasing may lead to a downward revision of growth rates particularly, where the base year is far removed from the present year. This is because as the economic environment changes continuously, the structure of prices becomes less like that of the base year over time and may result in the economic growth being overstated. This is especially true of the Laspeyres Index which tends to overstate the true rate of growth

the farther away is the base year. Economic theory advances that this is the case in demand dominated markets where price and quantity tend to move in opposite directions or are inversely related. A substitution effect occurs because consumers usually react to changes in relative prices by substituting goods and services that have become relatively cheaper for those that have become relatively more expensive. The goods and services whose prices have become cheaper tend to show a higher volume of growth and thus on rebasing the weight of these goods become smaller.

On the other hand, rebasing may lead to an upward revision of past growth rates. Allen (1975) suggests that this occurs in instances where price and quantity are positively related. This is the economic situation where the market is dominated by suppliers so that the typical reaction to a price increase is an increase in the supply. Further, Allen (1975) indicated that whenever sharp increases in prices are accompanied by large increases in output the rates of growth will be higher in the rebased Index than in the old. The converse is also true. Moreover, upward revisions in growth rates tend to occur in periods of economic expansion.

In the context of Trinidad and Tobago, re-weighting has led to an upward revision in the annual average growth rates, implying that the growth rates at 1985 factor cost have been understating economic activity. This is observed in Table 3 which compares the annual average growth rates on the two different base years for the Petroleum and Non-Petroleum sectors, as well as the overall economy. The growth rates at 2000 market prices were higher than those on the 1985 base year and averaged 7 per cent over the period 1995 to 2003, compared with an average of 3.8 per cent for the old growth rates. The divergence in the growth rates of the non-energy sector was small and ranged from a low of -0.1 and to a high of 4.3 percentage points, while those in the energy sector were somewhat larger and ranged between -0.3 and 17.7 percentage points. Although the magnitude of growth in the two indices differed the trend was similar as the growth rates on the 2000 base year mimicked those on the 1985 base year. This trend is also clearly seen in Charts 1 to 3.

It is observed that the period 1998 to 2000 was marked by intense economic expansion in the energy sector as petrochemical production was boosted with the addition of four new plants (two ammonia and two methanol plants), as well as the commencement of production from the first LNG train.

In 2000, the first full year of the LNG production would have been realized along with higher than usual commodity prices. These factors combined would have had a significant influence on the growth rates during this period.

Charts 4 to 6 show the quarterly growth rates for the economy as a whole and also separately for the energy and non-energy sectors over the period 1995 to 2003. Similarly, the growth rates at 2000 market prices track those at 1985 factor cost well, but the magnitude of the former is larger with steeper rates of increases and decreases. In most instances, the rebased growth rates were larger in magnitude but there were instances when they were lower depending on which sectors were responsible for the evolution in the growth rate.

IV. Methodology

GDP at constant prices may be obtained by three methods, namely, the direct method, deflation and extrapolation. Extrapolation is the most practical and is widely used. The extrapolation method uses suitable indicators to measure economic activity in the various sectors. These indicators may be categorized into volume (or physical quantities) and value indicators, where growth in volume indicators are used to measure real output and value indicators are deflated using appropriate price indices to obtain real value added. It is important that these indicators be relevant, reliable and available on a timely basis.

The Central Bank follows the Trinidad and Tobago System of National Accounts (TTSNA) industrial classification. The CSO has completed its rebasing of the national accounts from 1985 = 100 to 2000 = 100 and has made major revisions to the methodology for certain sectors. The Central Bank in its revision has adopted the methodologies used by the CSO to the extent that the indicators or extrapolators used to measure economic activity in the various sectors are available on a quarterly basis. In instances where the indicators used by the CSO are only available on an annual basis, the Central Bank's choice of extrapolators for those sectors will be different. Table 4 compares the extrapolators used by the Central Bank and the CSO.

V. Conclusion

In essence, the updating of the base year to re-flect the current economic realities as well as revising the methodology have resulted in a re-calculation of the historical growth rates. Given the changing economic structure, these growth rates will be significantly influenced by economic activity emanating especially from the energy sector (with respect to Crude Oil, Natural Gas, LNG and Petrochemicals).

Table 1
Selected Economic Indicators, 1996 – 2003

Item	1996	1997	1998	1999	2000	2001	2002	2003
% change in Real GDP (1985 = 100)	2.9	3.0	4.6	5.8	5.7	4.0	3.2	4.1
Inflation Rate (%)	3.3	3.7	5.6	3.4	3.6	5.5	4.2	3.8
Unemployment Rate (%)	16.3	15.0	14.2	13.1	12.2	10.8	10.4	10.5
Overall Central Government Surplus(+)/Deficit(-) ($M)	171.0	41.4	-741.0	-1,355.3	819.1	-40.6	359.9	1,835.0
Overall Central Government Surplus(+)/Deficit(-) (% of GDP at current market prices)	0.5	0.1	-1.9	-3.1	1.6	-0.1	0.6	2.7
Balance of Payments (US$M)	213.5	175.3	80.6	162.2	441.0	470.6	48.9	334.2
Balance of Payments (% of GDP)	3.7	3.0	1.3	2.4	5.5	5.3	0.5	3.2
W.T.I. (US$/barrel)	22.20	20.35	14.40	19.25	30.29	26.09	26.03	31.34
Natural Gas / Liquefied Natural Gas[1] (Nymex Henry Hub) (US$/mmbtu)	na	na	na	2.24	3.43	4.11	3.36	5.53
Ammonia (fob Caribbean) (US$/tonne)	188	161	118	92	145	137	111	201
Methanol (fob Rotterdam) (US$/tonne)	153	187	139	109	168	198	164	257

Sources: Central Statistical Office and The Central Bank of Trinidad and Tobago

[1] Natural Gas is exported in the form of Liquefied Natural Gas (LNG). Trinidad began exporting LNG in April 1999.

na: not available

Table 2
Comparison of Base Year Weights for QGDP Estimate

Sectors	2000	FC	MP	1982	1970
		1985			
PETROLEUM	**317.5**	**267.8**	**266.4**	**270.2**	**229.9**
Petrochemicals	47.1	15.8	16.3	6.7	18.6
Other Petroleum	269.1	252.0	250.2	263.5	211.3
Of Which: Exploration and production	176.4	218.2	218.0	233.3	120.0
LNG	27.9	-	-	-	-
NON-PETROLEUM	**682.5**	**732.2**	**733.6**	**729.8**	**770.1**
Agriculture	**16.9**	**47.8**	**24.3**	**31.1**	**64.0**
Export agriculture	0.5	2.2	2.1	2.3	8.3
Domestic agriculture	8.2	26.8	16.1	17.5	22.6
Sugar industry	8.2	18.8	6.2	11.3	33.1
Manufacturing	**76.0**	**66.5**	**73.3**	**61.0**	**99.1**
Food, drink and tobacco	33.6	27.0	31.0	22.7	31.5
Textiles, garments, footwear and headwear	1.7	4.1	3.8	4.1	9.3
Printing, publishing and paper converters	8.3	6.1	6.2	4.5	8.4
Wood and related products	3.1	2.7	2.1	2.9	5.0
Chemicals and non-metallic minerals	13.1	11.8	12.2	10.4	14.4
Assembly type and related industries	10.7	13.2	16.0	14.9	25.6
Miscellaneous manufacturing	5.6	1.9	2.0	1.5	4.9
Electricity and water	**18.0**	**25.4**	**10.0**	**18.9**	**27.0**
Construction and quarrying	**74.9**	**110.9**	**111.8**	**149.3**	**61.5**
Distribution services including restaurants	**177.5**	**59.2**	**121.6**	**85.6**	**140.3**
Transportation, storage and communication	**90.2**	**115.3**	**89.4**	**125.1**	**156.0**
Finance, insurance, real estate and business services	**146.5**	**118.3**	**120.9**	**108.0**	**78.9**
Less: FISIM	44.8	43.6	44.8	58.3	20.9
General government	**78.6**	**152.3**	**151.7**	**143.2**	**89.5**
Other Services	**48.7**	**80.1**	**75.2**	**65.9**	**74.7**
Hotels and guest houses	3.7	3.4	3.5	3.6	6.0
Education and cultural community services	29.0	47.4	47.2	40.5	31.0
Personal services	16.0	29.3	24.5	21.8	37.7
Gross Domestic Product	**1000.0**	**1000.0**	**1000.0**	**1000.0**	**1000.0**

Source: Compiled from value added data obtained from the Central Statistical Office.

Source: Compiled from value added data obtained from the Central Statistical Office.

Table 3

Comparison of the Growth Rates based on 2000 =100 and 1985 = 100

	Growth Rates based on Weights at 2000=100							
Sector	1996	1997	1998	1999	2000	2001	2002	2003
Petroleum Sector	5.1	-2.3	15.7	18.9	9.0	1.3	11.0	29.1
Non-Petroleum	3.6	6.5	6.7	5.6	9.7	5.1	2.6	3.6
Total	4.1	3.6	9.5	9.9	9.5	3.8	5.5	12.8
	Growth Rates based on Weights at 1985 =100							
Sector	1996	1997	1998	1999	2000	2001	2002	2003
Petroleum Sector	1.8	-2.0	5.4	8.1	1.1	0.7	10.7	11.4
Non-Petroleum	3.3	2.2	4.4	5.1	7.2	5.2	0.5	1.8
Total	2.9	1.2	4.6	5.8	5.7	4.2	2.7	4.1
	Divergence in Growth Rates							
Sector	1996	1997	1998	1999	2000	2001	2002	2003
Petroleum Sector	3.3	-0.3	10.3	10.8	7.9	0.6	0.3	17.7
Non-Petroleum	0.3	4.3	2.3	0.5	2.5	-0.1	2.1	1.8
Total	1.2	2.4	4.9	4.1	3.8	-0.4	2.8	8.7

Source: Central Bank of Trinidad and Tobago.

Table 4

A comparison of Deflators/Extrapolators used by the Central Statistical Office (CSO) and the Central Bank Of Trinidad And Tobago (CBTT)

Sector/Subsector		CSO	CBTT
00-00-00	**Export Agriculture**		
00-01-00	Cocoa and Coffee	Quantities of Cocoa and Coffee Produced	Quantities of Cocoa and Coffee Produced
	Citrus	Quantity of Oranges, Grapefruit and Limes Produced	Quantities of Oranges and Grapefruit Produced
00-02-00	**Domestic Agriculture**		
01-01-00	Copra	Quantity of Copra Produced	Quantity of Copra Produced
01-02-00	Bananas and Plantains	Quantity of Bananas and Plantains Produced	Quantity of Bananas Produced
01-03-00	Root Crops, Pulses, Vegetables, Rice	Quantity produced for individual commodities	Quantity produced for selected commodities
01-04-00	Poultry and Eggs	Quantity Produced - Broiler Meat, Broiler Chicks, Hatchery Eggs and Table Eggs	Quantity Produced - Broiler Meat, Broiler Chicks, Hatchery Eggs and Table Eggs
01-05-00	Dairy, Beef and Other Meat	Quantity Produced - Milk, Beef, Mutton and Goat	Quantity Produced - Milk, Beef and veal, Mutton
01-06-00/	Pork- Private Production	Quantity Produced for the respective Commodities - Beef, Milk and Pork	Quantity produced
01-07-00	Milk and Beef and Pork - State Lands Production		
01-08-00	Forestry	Sawn Log Out turn from the Natural Forest	
01-09-00	Fisheries	Quantity of Fish Landed	
02-00-00	**Sugar**		
02-01-00	Cane Farmers	Quantity of Cane Produced	Quantity of sugar Produced
02-02-00	Sugar Companies	Quantity of Cane Produced	Quantity of sugar Produced
		Quantity of Sugar Produced	Quantity of sugar Produced
02-03-00	Distilleries	Index of Domestic Production - Alcoholic Beverages	

Table 4 (cont'd)

A Comparison of Deflators/Extrapolators Used by the Central Statistical Office (CSO) and the Central Bank of Trinidad and Tobago (CBTT)
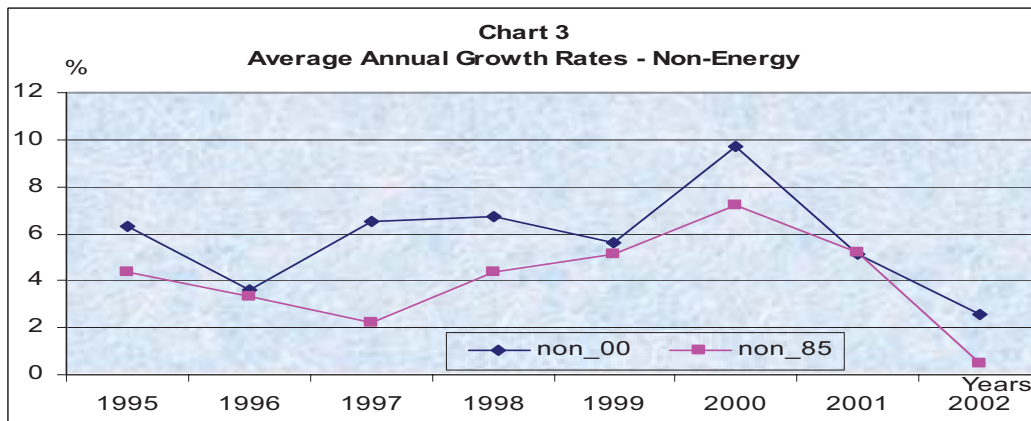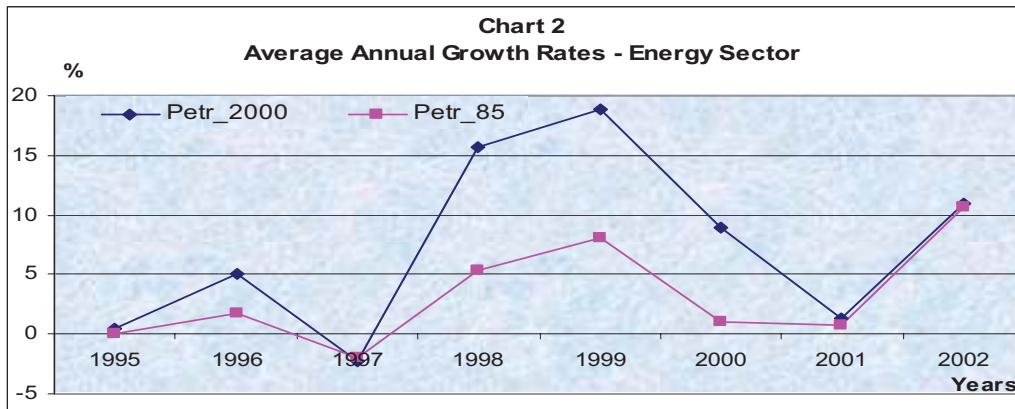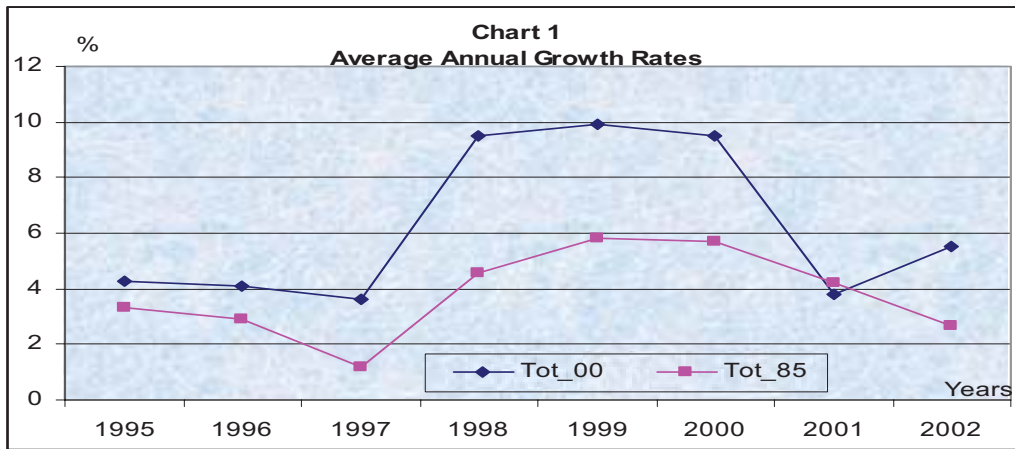
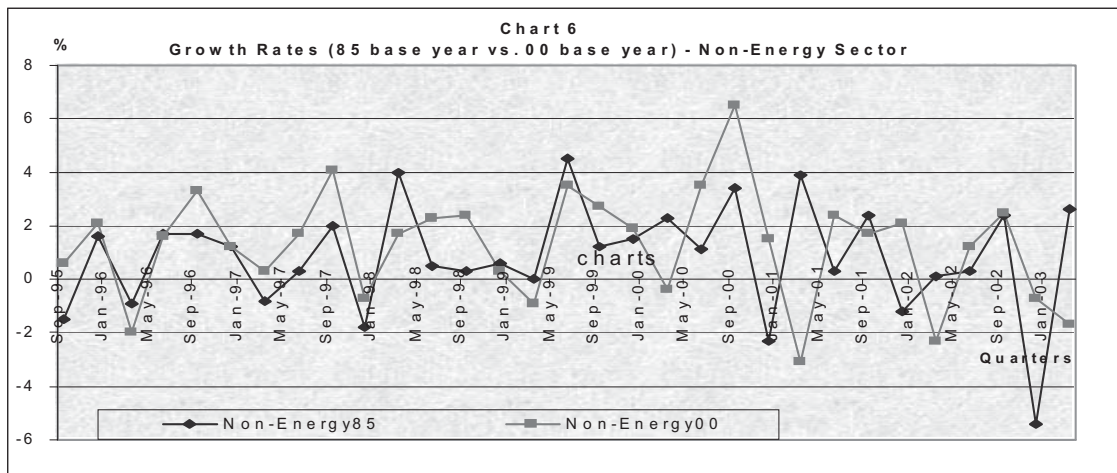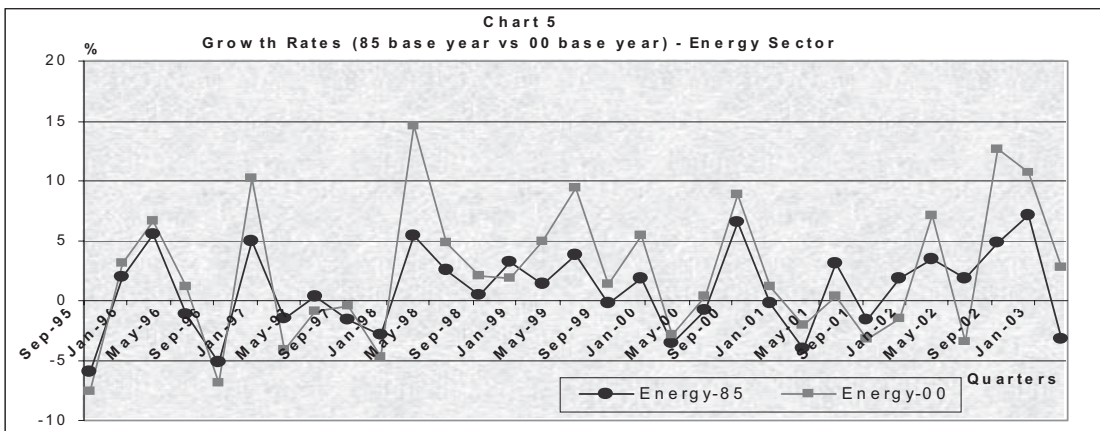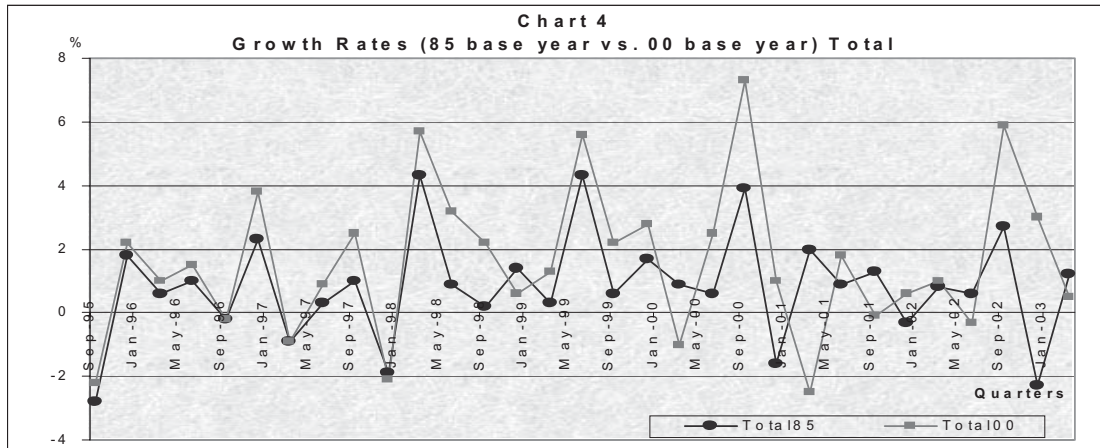| Sector/Subsector		CSO	CBTT
03-00-00	**Petroleum**		
03-01-00	Exploration and Production	Quantity of Crude Produced (Gas Output is converted to Crude via"a Barrel of Oil equivalent" Method)	Crude oil production Natural gas in "BOE"
03-02-00	Refinery (Gas and Oil)	1. Refining Throughput 2. Quantity of Natural Gas Refined	Refinery throughput Production of NGLs and LNG production
03-03-00	Service Contractors	Index of Rig Months	Rig months
03-04-01	Bulk Distribution	Volume of Inland Sales by National Petroleum Marketing Company Limited	Volume of Inland Sales by National Petroleum Marketing Company Limited
03-04-02	Retail Distribution	Volume of Sales to Service Stations by National Petroleum Marketing Company Limited	Volume of Sales to Service Stations by National Petroleum Marketing Company Limited
03-04-03	Distribution and Transmission of Natural Gas	Volume of Natural Gas Sold	Natural Gas Utilization
03-05-00	Petrochemicals	Quantities Produced - Urea, Methanol, Ammonia	Quantities Produced - Urea, Methanol, Ammonia
03-06-00	Asphalt	Quantity of Refined Asphalt Produced	
04-00-00- 10-00-00	**Manufacturing**	Index of Domestic Production for the relevant Industries/ Sub-industries	Production Survey of output produced
11-00-00	**Electricity and Water**	1. Quantity of Kilowatt Hours 2. Generated Quantity of Cubic Metres of Water Produced	1. Quantity of Kilowatt Hours Generated 2. Quantity of Cubic Metres of Water Produced
12-00-00	**Construction**	Weighted Composite Index of Retail Prices of Building Materials and Minimum Wage Rates for Construction Workers	Composite Index of building materials – Local sales of cement, volume of aggregates mined, local sales of iron and steel and imported construction materials deflated by retail prices of building materials.
13-00-00	**Distribution**	Modified Index of Retail Prices	Imports deflated by the Index of Average Unit Value of Imports (all items), and Retail Sales Index (All items) deflated by the RPI (All items)
14-00-00	Hotels and Guest Houses	Weighted Composite Index of Food, Drink and Tobacco and an Index of Average Room Rate	Number of holiday and business visitors
15-00-00	**Transport Storage and Communication**		
15-01-00	Bus Service	Number of Passengers Carried	
15-02-00	Taxi Service and Car Rentals	Number of Registered Taxis, Maxi Taxis and Rented Cars	Number of Insured Taxis, Maxi Taxis and Rented Cars
15-03-00	Trucks	Number of Registered Goods Vehicles	Number of Insured Goods Vehicles

Table 4 (cont'd)

**A Comparison of Deflators/Extrapolators Used by the Central Statistical Office (CSO)
and the Central Bank of Trinidad and Tobago (CBTT)**

Sector/Subsector		CSO	CBTT
15-04-00	Shipping Lines	Implicit Price Deflator	
15-05-00	Port Authority	Tonnage of Cargo Handled	Tonnage of Cargo Handled
15-06-00	Airlines	Revenue Passengers Carried	Revenue Passengers Carried on BWIA
15-07-00	Airport	(i) Implicit Price Deflator (ii) Number of Passengers who paid Departure Taxes	
15-08-00	Services Ancilliary to Transport - Travel Agents, Customs Brokers	(i) Air Departures (ii) Average Unit Value of Imports (iii) Implicit Price Deflator	
15-09-00	Storage	Implicit Price Deflator	
15-10-00	Telecommunications	Number of Call Units for Local and International Calls	Number of Call Units for Local and International Calls
15-11-00	Post Office and Courier Services	Mail Parcel Post - Quantity Handled	Mail Parcel Post - Quantity Handled
15-12-00	Radio and Television Broadcasting	Implicit Price Deflator	
16-00-00	**Finance, Insurance, Real Estate & Businesses**		
16-01	Central Bank	Number employed	Number employed
16-02	Commercial Banks	Weighted Index of interest rates	Average loans, investments deposits & fund raising instruments, deflated by the RPI
16-03-01	Finance and Merchant Banks	Index of interest rates on deposits 1-3 years and installment loans	Average loans, investments deposits & fund raising instruments, deflated by the RPI
16-02-02	Trust and Mortgage Co's	Index of interest rates on residential and commercial rates	Average loans, investments deposits & fund raising instruments, deflated by the RPI
16-02-03	A.D.B.	Number of loans disbursed	
	Trinidad and Tobago Mortgage Finance Company	Weighted Index of Residential and Installment rates	
16-03-04	Building Socities and Credit Unions	Number employed	
16-03-05	Financial institutions n.e.s.	Same as Commercial Banks	
	Trinidad and Tobago Stock Exchange	Volume of shares traded	Volume of shares traded
	Unit Trust Corporation	Number of unit holders	Number of unit holders
	Home Mortgage Bank	Same as Trinidad and Tobago Mortgage Finance Company	
16-04	Insurance Companies	Number of new policies - life and non-life	Number of new policies - life and non-life
16-05	Real Estate	Combined weighted Index of Retail Prices of Building Materials and Minimum Wage Rates for Construction Workers	Number of real estate mortgage loans by banks and non-banks
16-06	Dwelling Services	Index of Retail Prices - Housing Section rebased to 2000 =100	Number of real estate mortgage loans by banks and non-banks

16-07	Professional and Technical Services	Index of Retail Prices rebased to 2000=100	
16-08	Advertising	Index of Retail Prices rebased to 2000 =100	
16-09	Miscellaneous Business Services	Index of Retail Prices rebased to 2000 =100	
16-10	Machinery and equipment rental	Index of Retail Prices rebased to 2000=100	
16-11	National Insurance Board	Benefit payments - number of transactions	
16-12	Investment Holding Companies	Index of Retail Prices rebased to 2000 =100	
17-00-00	**Government**	Numbers Employed in Central Government	Employment in state enterprises and public service/statutory boards
18-00-00	**Education and Cultural Community Services**		
	Ministry of Education	Number of Teachers Employed	Number of Teachers Employed
18-00-00	**Education and Cultural Community Services**		
	University of the West Indies	Number of Students Enrolled	
	Private Sector Education	Index of retail Prices - Education Section	
19-00-00	**Personal Services**	Index of Retail Prices - Various Section Indices	Employment

Chart 1
Average Annual Growth Rates

%

(Tot_00 / Tot_85)

1995 1996 1997 1998 1999 2000 2001 2002

Years

Chart 2
Average Annual Growth Rates - Energy Sector

%

(Petr_2000 / Petr_85)

1995 1996 1997 1998 1999 2000 2001 2002

Years

Chart 3
Average Annual Growth Rates - Non-Energy

%

(non_00 / non_85)

1995 1996 1997 1998 1999 2000 2001 2002

Years

Chart 4
Growth Rates (85 base year vs. 00 base year) Total

Chart 5
Growth Rates (85 base year vs 00 base year) - Energy Sector

Chart 6
Growth Rates (85 base year vs. 00 base year) - Non-Energy Sector

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