

Quarterly National Accounts

Fourth Quarter 2009

Introduction

The Central Statistics Office publishes Quarterly National Accounts (QNA) estimates in a series of Economic and Social Indicators since 2005. Besides being one of the requirements for the country to graduate to the Special Data Dissemination Standard (SDDS) of the International Monetary Fund (IMF), quarterly estimates of Gross Domestic Product (GDP) provide users with up-to-date information for monitoring economic cycles and short-term changes.

This issue presents quarterly estimates of GDP for first quarter 2006 to the fourth quarter of 2009. Estimates have been worked out using both the production and the expenditure approach, based on latest available data. The production data covering value added at current prices and growth rates over the corresponding period of the previous year by industry group are presented in Tables 1 and 2, and the components of expenditure of GDP in Tables 3 and 4. Data in these tables have not been seasonally adjusted, which partly explains the fluctuations in the series (Figure 1).

For more meaningful trend analysis, seasonally adjusted estimates of quarterly GDP from the production approach have been worked out. The derived quarter-to-quarter growth rates for first quarter 2002 to the fourth quarter of 2009, together with some analysis are presented in section 5 of this publication.

Definitions of terminology are given on pages 8 and 9. The data sources and methods used including the method used for seasonal adjustment are described in the Annex.

2. Quarterly GDP estimates at current prices

2.1 Overall GDP

Fig 1: Quarterly GDP estimates at current basic prices, Q₁ 2006 – Q₄ 2009

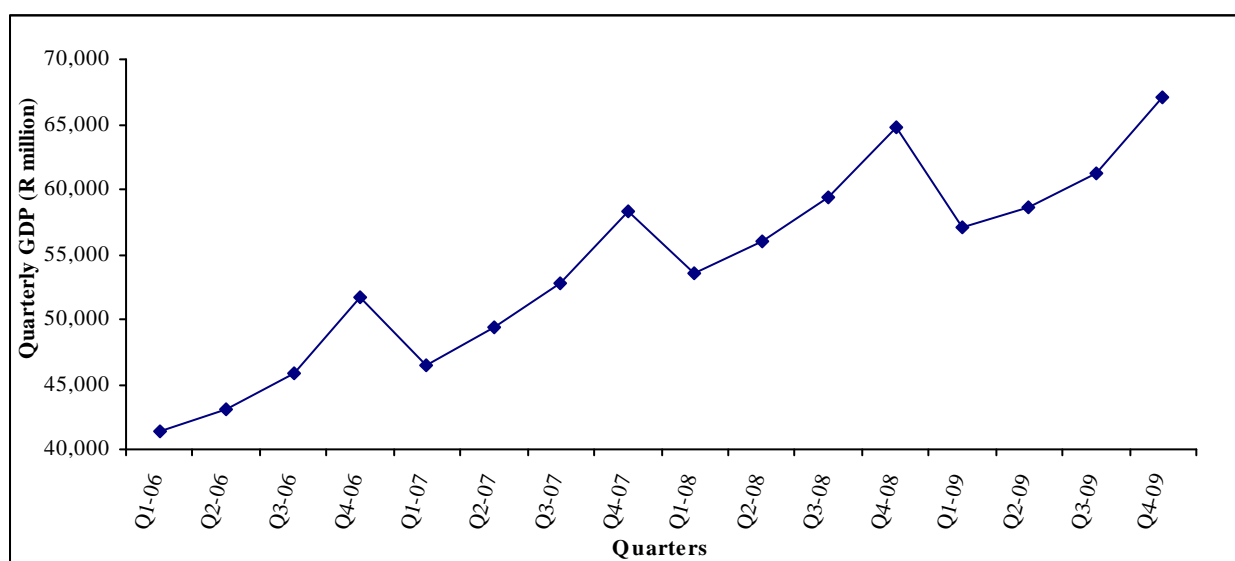


Figure 1 shows the quarterly GDP estimates at basic prices for first quarter 2006 to the fourth quarter of 2009. It is observed that throughout the period, the quarterly data follow the same pattern every year. Production is relatively low in the first quarter; it increases gradually in the two subsequent quarters to peak in the last quarter before declining in the first quarter of the following

year. This pattern clearly indicates seasonality in the data. Thus, in 2008, GDP at current basic prices which stood at R 53,493 million in the first quarter, increased to R 56,069 million in the second and to R 59,421 million in the third to peak at R 64,701 million in the fourth quarter. It then declined to R 57,077 million in the first quarter of 2009.

The lower GDP figures observed during the first quarters may be due to lower economic activities resulting from temporary closures of firms during the month of January because of New Year festivities. On the other hand, the higher GDP figures during the last quarters could be explained by more activities in “Hotels and restaurants” due to high tourist arrivals, and “Manufacturing” and “Wholesale and retail trade” to meet the high demand for consumption goods for end of year festivities.

Quarterly data for the years 2006 to 2009 indicate that around 23% of the annual GDP was produced in the first quarters, 24% in the second quarters, 25% in the third quarters and 28% in the fourth quarters.

Quarterly GDP at current basic prices for the fourth quarter of 2009 is estimated at R 67,099 million compared to R 61,219 million in the previous quarter and to R 64,701 million in the corresponding quarter of 2008.

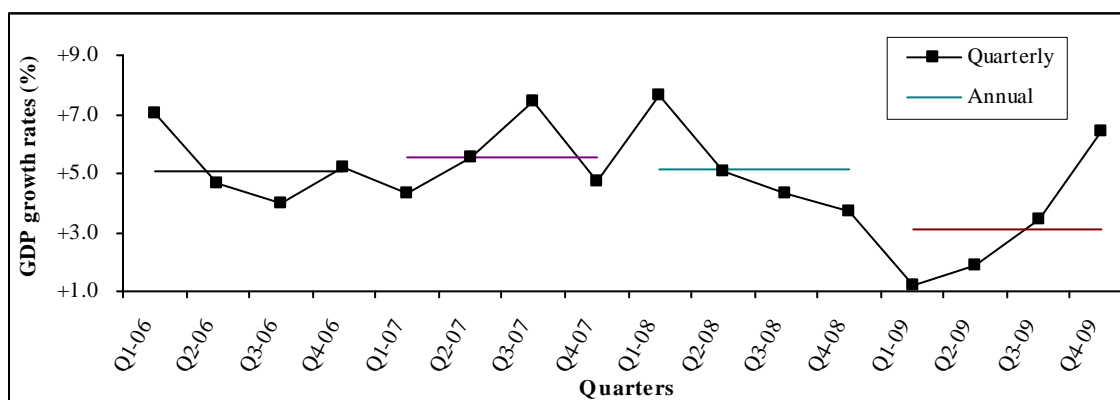
3. Quarterly GDP growth rates (based on data unadjusted for seasonality) – Table 2

3.1 Growth rates, Q₁2006 – Q₄2009, (year on year change)

Table 2 shows year on year quarterly growth rates by industry group for the period first quarter of 2006 to the fourth quarter of 2009. The rates represent the percentage change in real value added over the same quarter of the previous year and hence exclude changes due to seasonal factors.

Figure 2 shows the year on year quarterly GDP growth rates for first quarter 2006 to fourth quarter 2009 and the annual rates for 2006 to 2009. The economy grew steadily during the period 2006 to 2008 as indicated by the annual GDP growth rates: 5.1% in 2006, 5.5% in 2007 and 5.1% in 2008. A slowdown is then observed in 2009 with a growth of only 3.1%.

Fig. 2: GDP growth rates, quarterly (percentage change over corresponding period of previous year) and annual, Q₁ 2006 – Q₄ 2009



After a high growth of 7.0% during the first quarter of 2006, GDP slowed down in the following quarters to pick up during the third quarter of 2007 when a growth of 7.5% was registered. It then dipped to 4.8% in the fourth quarter of 2007 but recovered in the first quarter of 2008 with a growth of 7.6%. Thereafter, quarterly GDP declined continuously to reach 1.2% in the first quarter of 2009.

Improvement in the economy was subsequently observed when growths of 1.9%, 3.5% and 6.4% were registered for the second, third and fourth quarters of 2009 respectively.

3.2 Growth rates, third quarter 2009 over third quarter 2008

Based on latest available information, GDP growth for the third quarter of 2009 over the corresponding quarter of 2008 has been revised downwards to 3.5% instead of 3.8% estimated in December 2009. This downward revision is mostly explained by lower growths in “Agriculture, hunting, forestry and fishing” (13.5% instead of 18.6%), “Manufacturing” (0.6% instead of 0.8%), “Electricity, gas and water” (1.1% instead of 2.5%), “Construction” (7.0% instead of 8.4%), “Education” (1.6% instead of 1.8%) and “Health and social work” (8.1% instead of 9.5%).

3.3 Growth rates, fourth quarter 2009 over fourth quarter 2008

GDP growth rate for the fourth quarter of 2009 over the corresponding quarter of 2008 works out to 6.4%. Growth was registered in all sectors except for “Mining and quarrying” (Table 2). Growth by industry group were as follows:

“Agriculture, hunting, forestry and fishing” grew by 13.0% in the fourth quarter of 2009, lower than the 13.5% growth of the previous quarter. The growth of 13.0% in the fourth quarter was due to growths of 15.0% and 11.4% in “Sugar cane” and “Other agriculture” respectively.

“Mining and quarrying” registered a negative growth of 18.8% in the fourth quarter of 2009 following that of -5.6% in the third quarter of 2009.

“Manufacturing” picked up with a growth rate of 4.7% in the fourth quarter of 2009 after a low growth rate of 0.6% in the third quarter of 2009. This is explained by growths of 15.0% in “Sugar”, 7.0% in “Food (excluding sugar)”, 1.3% in “Textile” and 3.6% in “Other manufacturing”.

“Electricity, gas and water supply” grew by 4.7% in the fourth quarter of 2009, higher than the growth of 1.1% registered in the previous quarter.

“Construction” went up by 24.8% in the fourth quarter of 2009 compared to 7.0% in the third quarter of 2009. This high growth of 24.8% is mainly explained by high expenditure on public infrastructure projects.

“Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods” grew by 5.0% in the fourth quarter of 2009 compared to 2.1% in the third quarter of 2009.

“Hotels and restaurants” picked up by 3.0% in the fourth quarter of 2009 after the negative growth of 9.1% in the third quarter of 2009.

“Transport, storage and communications” grew by 5.8% in the fourth quarter of 2009 after the growth of 6.0% in the third quarter of 2009.

“Financial intermediation” registered a higher growth of 5.3% in the fourth quarter of 2009 after the growth of 4.3% for the third quarter of 2009.

“Real estate, renting and business activities” grew by 5.5% in the fourth quarter of 2009, almost same as the growth of 5.6% in the third quarter of 2009.

“Public administration and defence; compulsory social security” grew by 3.0% in the fourth quarter of 2009 compared to a growth of 2.1% in the third quarter of 2009.

“Education” grew by 1.8% in the fourth quarter of 2009 following a growth of 1.6% in the third quarter of 2009.

“Health and social work” grew by 6.3% in the fourth quarter of 2009, lower than the growth of 8.1% in the third quarter of 2009.

“Other community, social and personal service activities and private households with employed persons” grew by 9.2% in the fourth quarter of 2009 after the growth of 6.7% noted for the third quarter.

3.4 Contribution of industry groups to GDP growth, fourth quarter 2009

The contribution of an industry to GDP growth depends on two factors, namely, its share in the economy and the change in its real value added. From Table A and Figure 3, it is observed that the main contributors to the 6.4% growth in GDP during the fourth quarter of 2009 were “Construction” (1.6 percentage points), “Manufacturing” (1.0 percentage point), “Wholesale & retail trade, etc” (0.7 percentage point), “Agriculture, hunting, forestry and fishing” (0.6 percentage point), “Transport, storage and communications” (0.6 percentage point) and “Real estate, renting and business activities” (0.6 percentage point).

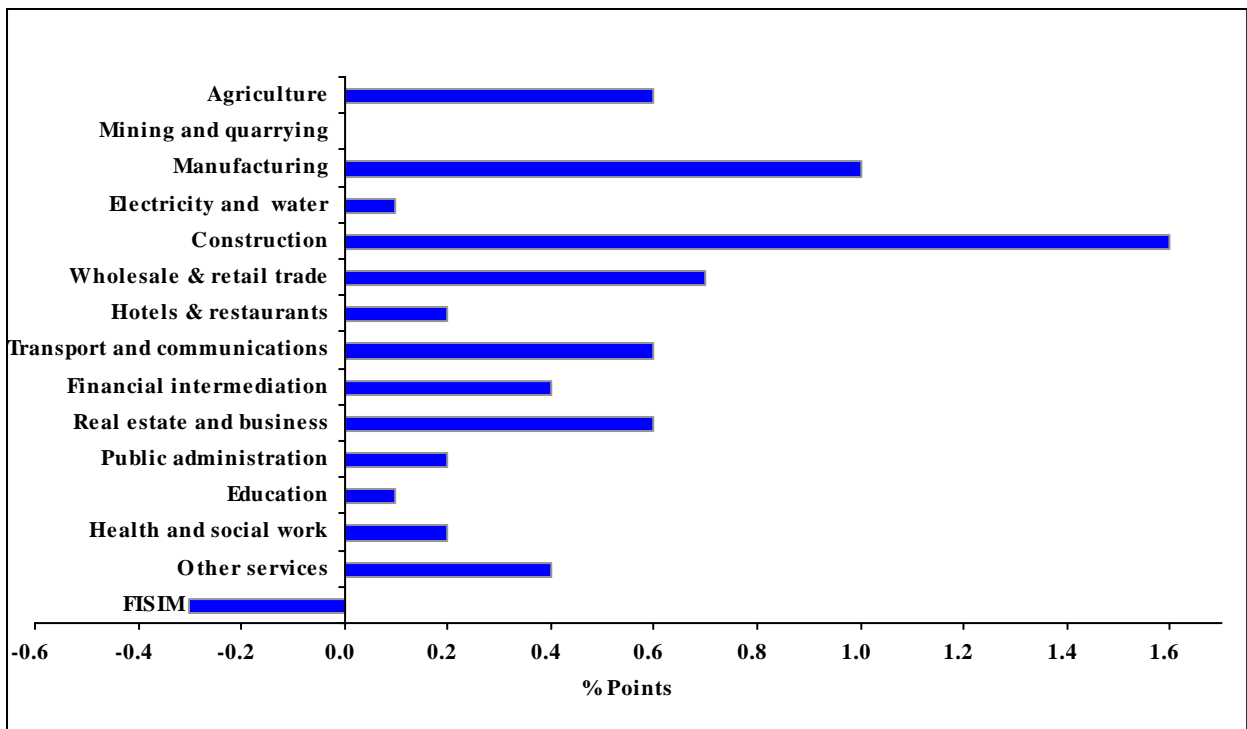
Contributions of the other industry groups ranged from 0.1 to 0.4 percentage point except “Mining and quarrying” whose contribution was almost negligible.

Table A: Contribution of industry groups to GDP growth (percentage point), Q₁ 2008 – Q₄ 2009

Industry	Contribution to GDP growth							
	Q ₁ 2008	Q ₂ 2008	Q ₃ 2008	Q ₄ 2008	Q ₁ 2009	Q ₂ 2009	Q ₃ 2009	Q ₄ 2009
Agriculture, hunting, forestry and fishing	0.2	0.0	0.2	0.0	0.2	0.4	0.7	0.6
Mining and quarrying	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.8	0.8	0.4	0.5	0.0	-0.3	0.1	1.0
Electricity, gas and water supply	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1
Construction	1.0	0.8	0.7	0.3	-0.1	-0.3	0.5	1.6
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	0.8	0.6	0.5	0.4	-0.2	-0.1	0.3	0.7
Hotels and restaurants	0.8	0.3	0.2	-0.2	-1.0	-0.5	-0.6	0.2
Transport, storage and communications	1.6	0.3	0.5	0.6	0.4	0.6	0.7	0.6
Financial intermediation	1.1	1.0	1.2	1.0	0.7	0.6	0.5	0.4
Real estate, renting and business activities	1.0	0.8	0.7	0.9	0.8	0.8	0.7	0.6
Public administration and defence; compulsory social security	0.2	0.3	-0.1	0.1	0.1	0.2	0.2	0.2
Education	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Health and social work	0.2	0.2	0.0	0.2	0.2	0.2	0.3	0.2
Other community, social and personal service activities and private households with employed persons	0.3	0.4	0.4	0.2	0.3	0.4	0.3	0.4
FISIM	-0.6	-0.5	-0.6	-0.5	-0.3	-0.3	-0.3	-0.3
GDP at basic prices	7.6	5.1	4.3	3.7	1.2	1.9	3.5	6.4

Contribution of an industry to the GDP growth is calculated as the product of its share in the economy and the year on year growth rate.

Fig 3: Contribution of industry groups to GDP growth rate, fourth quarter 2009



4. Quarterly GDP by expenditure

4.1 Quarterly expenditure components at current prices

During the fourth quarter of 2009, final consumption expenditure which comprise consumption expenditure of private households and general government, amounted to R 68,096 million, representing 89.9% of the quarterly GDP at market prices. Final consumption of households estimated at R 57,401 million represented 75.8% of the quarterly GDP, and that of general government estimated at R 10,695 million was 14.1% of the GDP (Table 3).

Analysis of quarterly data from 2006 to 2009 shows seasonality in household consumption expenditure with highest consumption occurring during the fourth quarters. In 2009, it is noted that household consumption expenditure during the fourth quarter represented 28% of the yearly total compared to 23%, 24% and 25% in the first, second and third quarters respectively.

“Exports of goods” is observed to be highest during the third and fourth quarters while “Exports of services” which comprises mainly tourist earnings and revenue of the national airline from foreign travellers is highest during the first and fourth quarters.

Imports of goods are highest in the fourth quarters, mainly explained by high consumption at the end of the year.

There is no distinct seasonal pattern in the data for general government consumption expenditure, Gross Domestic Fixed Capital Formation (GDFCF) and imports of services.

4.2 Quarterly growth rates of expenditure components, fourth quarter 2009

Analysis of year on year quarterly GDP by expenditure shows that total final consumption expenditure in real terms increased by 3.9% in the fourth quarter of 2009, higher than the 3.5% growth in the third quarter of 2009 (Table 4). The final consumption expenditure of households grew

by 2.9% in the fourth quarter of 2009 compared to 2.2% in the previous quarter while that of general government rose by 8.5% compared to a growth of 10.2% in the third quarter of 2009.

After a decline of 2.0% in the third quarter of 2009, investment registered a high growth of 39.4% in the fourth quarter. This high growth of 39.4% is the result of growths of 27.5% in “Building and construction work” and 55.3% in “Machinery and equipment”.

The growth of 27.5% in “Building and construction work” was due to high investments in “Other construction work” (+72.6%) particularly in public infrastructure projects, Residential building” (+25.1%) and “Non-residential building” (+13.6%). The growth of 55.3% in “Machinery and equipment” is due to a high growth of 738.3% in “Other transport equipment” mainly attributable to the acquisition of one aircraft during the fourth quarter of 2009, partly offset by contractions of 35.2% and 16.0% in “Passenger car” and “Other machinery and equipment” respectively.

Both exports and imports of goods and services picked up during the fourth quarter of 2009 after a series of negative growths during the preceding four quarters. Exports of goods and services grew by 1.0% in the fourth quarter of 2009 after a decline of 6.1% in the previous quarter. The growth of 1.0% is the net result of a high growth of 16.5% in exports of services partly offset by a decline of 12.4% in exports of goods.

Imports of goods and services grew by 5.8% during the fourth quarter of 2009 after a contraction of 0.7% in the third quarter of 2009. Imports of goods rose by 7.8% and imports of services by 1.4%.

5. Seasonally adjusted quarterly GDP

Table B and Figure 4 show the year-on-year quarterly GDP growth rates based on unadjusted data and the quarter-to-quarter growth rates based on seasonally adjusted data for the period 2002 to 2009.

As indicated earlier, while the year-on-year growth rates can be used to analyse trends, the quarter to quarter growth rates provide a more meaningful trend analysis with the advantage of being able to detect trend changes much earlier. For example, the year-on-year growth rates show a sharp decline in economic activities during the first quarter of 2005 and a slow pick up in the second quarter. On the other hand, the quarter-to-quarter data reveal slowing down of the economy as early as from the second quarter of 2004.

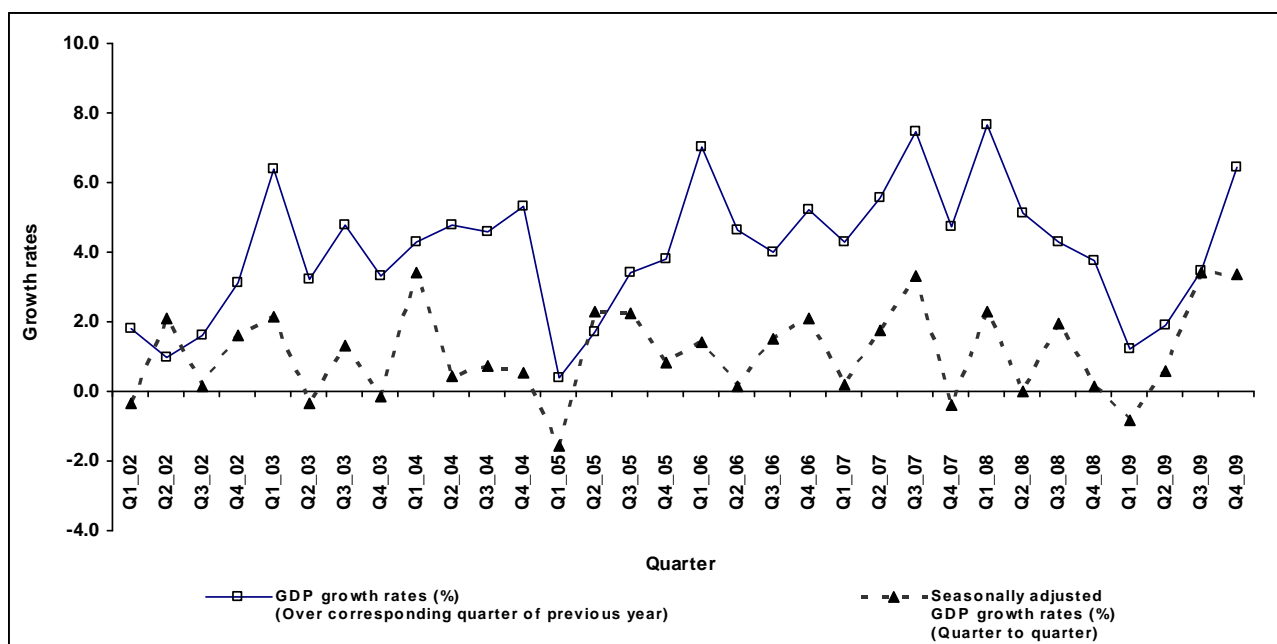
Quarter to quarter GDP growth rates based on seasonally adjusted data confirm improvement in the economy as from the second quarter of 2009 with a low growth of 0.6% in the second quarter followed by 3.4% in the third quarter and 3.3% in the fourth quarter.

Users may consult the website of the CSO (<http://statsmauritius.gov.mu>) for seasonally adjusted growth rates by industry group.

Table B: Quarterly GDP growth rates, Q₁ 2002 – Q₄ 2009

Quarter	GDP growth rates (%) (Over corresponding quarter of previous year)	Seasonally adjusted GDP growth rates (%) (Quarter to quarter)	Quarter	GDP growth rates (%) (Over corresponding quarter of previous year)	Seasonally adjusted GDP growth rates (%) (Quarter to quarter)
Q1_02	1.8	-0.4	Q1_06	7.0	1.4
Q2_02	1.0	2.1	Q2_06	4.7	0.2
Q3_02	1.6	0.1	Q3_06	4.0	1.5
Q4_02	3.1	1.6	Q4_06	5.2	2.1
Q1_03	6.4	2.1	Q1_07	4.3	0.2
Q2_03	3.2	-0.3	Q2_07	5.6	1.7
Q3_03	4.8	1.3	Q3_07	7.5	3.3
Q4_03	3.3	-0.1	Q4_07	4.8	-0.4
Q1_04	4.3	3.4	Q1_08	7.6	2.3
Q2_04	4.8	0.4	Q2_08	5.1	0.0
Q3_04	4.6	0.7	Q3_08	4.3	2.0
Q4_04	5.3	0.6	Q4_08	3.7	0.1
Q1_05	0.4	-1.5	Q1_09	1.2	-0.8
Q2_05	1.7	2.3	Q2_09	1.9	0.6
Q3_05	3.4	2.2	Q3_09	3.5	3.4
Q4_05	3.8	0.8	Q4_09	6.4	3.3

Figure 4: GDP growth rates (over corresponding quarter of previous year and quarter to quarter), Q₁ 2002 – Q₄ 2009.



Definition of terminology used

1. Gross Domestic Product (GDP)

GDP is the aggregate money value of all goods and services produced within a country out of economic activity during a specified period before provision for the consumption of fixed capital.

2. GDP at basic prices

GDP at basic prices is obtained as the difference between output and intermediate consumption whereby output is valued at basic prices and intermediate consumption at purchasers' prices.

The basic price is the amount receivable by the producer exclusive of taxes on products and inclusive of subsidies on products. The equivalent for imported products is the c.i.f. value, i.e. the value at the border of the importing country.

The purchasers' price is the amount payable by the purchaser exclusive of deductible taxes on products (e.g. deductible value added tax).

3. GDP at market prices

GDP at market prices is equal to the GDP at basic prices plus taxes (net of subsidies) on products.

4. Final Consumption expenditure

Final Consumption expenditure refers to the expenditure made on goods and services by households and government.

5. Gross Domestic Fixed Capital Formation (GDFCF)

GDFCF is the net additions to the physical assets of the country in a year. These consist mainly of investment in buildings, plants, machinery and transport equipment, all valued at market prices.

6. Exports and Imports of goods and services

Exports and imports of goods are measured on an f.o.b. basis. Insurance and freight, which represent the difference between the c.i.f. and f.o.b. values of imports of goods, are recorded as import of services.

Exports and imports of goods are compiled according to the General Trade System, using the national boundary as the statistical frontier. All goods entering the country are recorded in imports and goods leaving the country in exports.

7. Goods-producing industries

Goods-producing industries comprise "Agriculture, hunting, forestry and fishing", "Mining and quarrying", "Manufacturing", "Electricity, gas and water supply" and "Construction".

8. Services industries

Services industries include “Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods”, “Hotels and restaurants”, “Transport, storage, communications”, “Financial intermediation”, “Real estate, renting and business services”, “Public administration and defence; compulsory social security”, “Education”, “Health and social work”, “Other community, social and personal service activities and private households with employed persons”.

9. Change in inventories

Change in inventories includes the value of the physical change in inventories of raw materials, work in progress, and finished goods held by producers.

10. Financial intermediation services indirectly measured (FISIM)

FISIM is obtained as the difference between interest received and interest paid by banks excluding those received on own funds. As it is difficult to allocate FISIM to the intermediate consumption of different industries, the total value of FISIM is imputed to a nominal industry with negative value added.

Note: Figures in some tables may not add up to the total published due to rounding off.

**Central Statistics Office
Ministry of Finance and Economic Empowerment
Port Louis
March 2010**

**Contact Person:
Mr. Y. Thorabally,
Statistician,
email: cso_qna@mail.gov.mu
Central Statistics Office
L.I.C Centre
Port-Louis
Tel: (230) 212-2316
Fax: (230) 211-4150**

Table 1 - Quarterly Gross Domestic Product by industry group at current basic prices, Q₁ 2006 - Q₄ 2009

(R million)

	Year (Cumulated 4 quarters)		2006				2007			
	2006	2007	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Agriculture, hunting, forestry and fishing	10,130	10,072	2,226	2,143	2,802	2,959	2,128	2,043	2,798
Sugarcane	5,137	4,620	1,082	991	1,452	1,613	973	891	1,306	1,450
Other	4,993	5,452	1,144	1,152	1,350	1,347	1,155	1,152	1,492	1,653
Mining and quarrying	101	96	23	23	29	26	22	22	25	28
Manufacturing	36,357	41,076	7,350	8,712	9,207	11,087	8,279	9,912	10,588	12,297
Sugar	1,586	1,426	244	330	482	530	219	297	434	477
Food (exc sugar)	10,137	12,301	2,080	2,482	2,469	3,106	2,274	3,154	3,003	3,870
Textile	11,974	13,435	2,535	3,037	3,011	3,391	2,966	3,541	3,442	3,487
Other	12,659	13,914	2,491	2,863	3,245	4,060	2,820	2,921	3,709	4,464
Electricity , gas and water supply	3,521	3,668	908	811	907	895	918	823	907	1,020
Construction	10,205	13,145	2,094	2,553	2,676	2,883	3,042	3,403	3,242	3,457
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	22,534	25,599	4,906	5,482	5,607	6,539	5,059	6,040	6,831	7,669
Wholesale and retail trade	21,246	24,137	4,584	5,160	5,285	6,217	4,694	5,675	6,465	7,303
Other	1,288	1,461	322	322	322	322	365	365	365	365
Hotels and restaurants	15,500	19,517	4,381	3,084	3,182	4,854	5,184	4,250	4,114	5,969
Transport , storage and communications	22,167	24,517	5,449	4,996	5,611	6,111	5,999	5,518	6,325	6,675
Financial intermediation	18,850	21,607	4,017	4,455	4,945	5,434	4,855	5,104	5,615	6,032
Insurance	5,154	5,700	1,025	1,163	1,475	1,491	1,140	1,278	1,656	1,627
Banks	11,477	13,317	2,487	2,731	2,870	3,389	3,159	3,198	3,299	3,661
Other	2,219	2,590	505	560	600	554	556	629	661	745
Real estate, renting and business activities	19,071	22,614	4,552	4,729	4,800	4,990	5,332	5,685	5,725	5,872
Owner occupied dwellings	9,102	10,675	2,182	2,215	2,334	2,371	2,467	2,670	2,784	2,755
Other	9,969	11,939	2,370	2,514	2,466	2,619	2,865	3,015	2,941	3,117
Public administration and defence; compulsory social security	12,199	12,674	2,931	3,107	3,010	3,152	2,998	3,290	3,163	3,224
Education	8,440	9,109	1,991	2,139	2,164	2,147	2,158	2,318	2,347	2,287
Health and social work	6,266	6,824	1,522	1,604	1,578	1,562	1,672	1,697	1,752	1,704
Other community, social and personal service activities and private households with employed persons	6,784	7,981	1,372	1,709	1,901	1,803	1,571	2,010	2,237	2,164
FISIM	-10,117	-11,528	-2,260	-2,472	-2,598	-2,788	-2,761	-2,777	-2,853	-3,137
Gross Domestic Product at basic prices	182,008	206,970	41,462	43,073	45,821	51,653	46,455	49,339	52,814	58,362
Taxes on products (net of subsidies)	24,319	28,549	5,985	5,978	5,735	6,622	6,538	6,688	6,916	8,407
Gross Domestic Product at market prices	206,328	235,519	47,446	49,051	51,556	58,274	52,993	56,027	59,731	66,769
Export Oriented Enterprises	13,694	15,584	2,813	3,611	3,560	3,709	3,351	4,118	4,060	4,055

Table 1 - (cont'd) Quarterly Gross Domestic Product by industry group at current basic prices, Q₁ 2006 - Q₄ 2009

(R million)

	Year (Cumulated 4 quarters)		2008 ¹				2009			
	2008	2009	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Agriculture, hunting, forestry and fishing	10,352	10,435	2,272	2,141	2,863	3,076	2,282	2,254	2,881	3,018
Sugarcane	4,503	3,936	949	868	1,273	1,414	829	759	1,112	1,236
Other	5,849	6,499	1,323	1,273	1,590	1,663	1,453	1,495	1,769	1,783
Mining and quarrying	101	88	24	23	26	29	22	17	25	25
Manufacturing	46,928	47,405	9,812	11,301	11,968	13,848	10,326	11,355	11,850	13,875
Sugar	1,390	1,215	214	290	423	465	187	253	369	406
Food (exc sugar)	16,560	16,220	3,213	4,142	4,148	5,058	3,438	4,101	3,917	4,764
Textile	12,644	13,105	2,881	3,294	3,120	3,348	2,896	3,485	3,244	3,480
Other	16,334	16,866	3,504	3,575	4,277	4,978	3,805	3,515	4,319	5,226
Electricity , gas and water supply	4,893	5,989	1,109	1,234	1,281	1,270	1,514	1,395	1,527	1,554
Construction	16,216	17,289	3,947	4,190	3,999	4,081	4,070	4,117	4,195	4,907
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	28,840	29,331	5,820	6,910	7,535	8,575	6,125	7,000	7,480	8,726
Wholesale and retail trade	27,120	27,411	5,400	6,480	7,100	8,140	5,650	6,520	7,000	8,241
Other	1,720	1,920	420	430	435	435	475	480	480	485
Hotels and restaurants	20,047	17,748	5,775	4,861	4,162	5,249	5,068	3,900	3,660	5,120
Transport , storage and communications	25,453	26,617	6,586	5,690	6,423	6,755	6,402	5,958	6,736	7,522
Financial intermediation	25,576	28,443	6,050	6,325	6,600	6,601	6,800	6,746	7,341	7,556
Insurance	6,300	6,879	1,400	1,500	1,750	1,650	1,540	1,600	1,800	1,939
Banks	16,366	18,336	4,000	4,100	4,100	4,166	4,560	4,421	4,711	4,644
Other	2,910	3,228	650	725	750	785	700	725	830	973
Real estate, renting and business activities	26,884	28,952	6,426	6,656	6,761	7,041	7,147	7,253	7,135	7,419
Owner occupied dwellings	12,326	12,735	2,961	2,990	3,166	3,209	3,277	3,133	3,179	3,146
Other	14,558	16,217	3,465	3,666	3,595	3,832	3,870	4,120	3,956	4,273
Public administration and defence; compulsory social security	14,618	16,477	3,155	3,487	3,885	4,091	3,962	4,393	3,940	4,183
Education	10,440	11,432	2,331	2,503	2,806	2,800	2,727	2,901	2,906	2,898
Health and social work	7,911	9,140	1,836	1,878	2,069	2,129	2,249	2,311	2,279	2,302
Other community, social and personal service activities and private households with employed persons	9,425	10,784	1,853	2,372	2,644	2,556	2,136	2,736	3,016	2,896
FISIM	-14,000	-16,052	-3,500	-3,500	-3,600	-3,400	-3,750	-3,650	-3,750	-4,902
Gross Domestic Product at basic prices	233,684	244,079	53,493	56,069	59,421	64,701	57,077	58,684	61,219	67,099
Taxes on products (net of subsidies)	31,201	30,739	7,547	7,881	7,698	8,075	7,281	7,372	7,451	8,636
Gross Domestic Product at market prices	264,886	274,819	61,040	63,951	67,120	72,775	64,358	66,056	68,670	75,735
Export Oriented Enterprises	15,945	16,827	3,585	4,109	3,962	4,290	3,884	4,484	4,011	4,447

1/ revised estimates 2/ first estimates

**Table 2 - Gross Domestic Product-sectoral growth rates (% over corresponding period of previous year),
Q₁ 2006 - Q₄ 2009**

	Annual growth rate		2006				2007			
	2006	2007	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agriculture, hunting, forestry and fishing	+0.6	-5.2	+1.1	+4.0	+2.9	-4.0	-8.9	-8.6	-4.1	-1.0
Sugarcane	-2.9	-13.6	-2.9	-2.9	-2.9	-2.9	-13.6	-13.6	-13.6	-13.6
Other	+4.5	+3.4	+4.9	+9.4	+9.0	-3.1	-5.8	-6.3	+3.2	+18.6
Mining and quarrying	+9.1	-9.1	+7.9	+0.7	+26.3	+2.6	-8.0	-3.6	-21.7	-1.7
Manufacturing	+4.0	+2.2	+5.9	+2.7	+4.1	+3.8	+0.5	+3.9	+5.6	+0.1
Sugar	-2.9	-13.6	-2.9	-2.9	-2.9	-2.9	-13.6	-13.6	-13.6	-13.6
Food (exc sugar)	+9.6	+4.0	+12.3	+13.3	+7.2	+6.6	-5.1	+7.6	+4.5	+7.3
Textile	+2.9	+8.5	-0.1	-1.1	+6.2	+6.5	+7.2	+12.0	+11.9	+3.2
Other	+1.8	-3.1	+4.2	-1.2	+1.4	+2.9	+2.8	-8.2	+0.4	-6.1
Electricity , gas and water supply	+4.0	+3.4	+3.7	+5.3	+5.7	+1.6	+0.8	+2.0	+3.0	+8.0
Construction	+5.2	+15.2	-1.3	+0.9	+10.2	+10.7	+30.2	+17.9	+8.0	+8.1
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	+5.5	+4.5	+19.9	+7.6	-1.5	+0.2	-5.3	-0.2	+14.1	+8.3
Wholesale and retail trade	+5.4	+4.4	+20.6	+7.6	-1.9	0.0	-6.1	-0.5	+14.4	8.4
Other	+7.0	+6.7	+8.7	+9.2	+5.3	+4.7	+6.4	+5.0	+8.4	+7.1
Hotels and restaurants	+3.5	+14.0	+6.1	-0.2	+3.2	+4.1	+15.1	+22.7	+13.6	+7.9
Transport , storage and communications	+7.4	+7.7	+8.5	+5.8	+5.8	+9.3	+5.2	+7.3	+10.1	+8.2
Financial intermediation	+7.0	+7.5	+4.5	+4.2	+8.0	+11.1	+11.9	+6.6	+5.2	+7.0
Insurance	+5.0	+5.1	+5.0	+4.8	+5.5	+4.7	+5.2	+4.7	+5.1	+5.5
Banks	+7.1	+7.9	+4.3	+4.5	+6.3	+12.8	+14.0	+6.4	+5.3	+6.9
Other	+11.0	+11.2	+4.9	+2.0	+21.3	+17.5	+11.3	+10.9	+11.3	+11.2
Real estate, renting and business activities	+6.5	+7.6	+6.0	+7.6	+6.4	+6.4	+6.5	+7.7	+9.0	+7.2
Owner occupied dwellings	+4.4	+4.9	+4.5	+4.5	+4.4	+4.4	+2.1	+6.9	+6.5	+4.4
Other	+8.5	+10.0	+7.4	+10.7	+8.4	+8.3	+10.7	+8.4	+11.3	+9.7
Public administration and defence; compulsory social security	+4.0	+0.5	+4.1	+4.0	+0.1	+7.8	-0.7	+2.9	+1.2	-1.4
Education	+4.1	+2.5	+3.6	+3.5	+3.7	+5.6	+3.2	+3.1	+2.8	+1.1
Health and social work	+7.9	+4.6	+7.0	+13.0	+4.5	+6.8	+5.8	+2.1	+6.4	+4.2
Other community, social and personal service activities and private households with employed persons	+6.5	+8.0	+8.6	+7.7	+5.4	+5.0	+8.0	+8.5	+8.8	+6.7
FISIM	+6.9	+7.5	+2.6	+8.5	+9.3	+6.9	+13.6	+6.6	+3.5	+7.0
Gross Domestic Product at basic prices	+5.1	+5.5	+7.0	+4.7	+4.0	+5.2	+4.3	+5.6	+7.5	+4.8
Taxes on products (net of subsidies)	-3.8	+5.5	+2.9	-6.7	-5.2	-5.6	-3.3	+1.5	+15.2	+18.1
Gross Domestic Product at market prices	+3.9	+5.5	+6.6	+3.4	+3.1	+4.1	+3.6	+5.2	+8.1	+6.0
Export Oriented Enterprises	+4.6	+8.0	+1.3	+1.4	+6.2	+9.4	+5.8	+8.8	+11.7	+5.5

Table 2 (cont'd) - Gross Domestic Product-sectoral growth rates
 (% over corresponding period of previous year), Q₁ 2006 - Q₄ 2009

	Annual growth rate		2008 ¹				2009			
	2008	2009	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Agriculture, hunting, forestry and fishing	+1.5	+10.6	+4.1	+0.3	+3.1	-0.9	+4.1	+9.9	+13.5	+13.0
Sugarcane	+3.7	+15.0	+3.7	+3.7	+3.7	+3.7	+15.0	+15.0	+15.0	+15.0
Other	-0.4	+7.3	+4.3	-2.0	+2.4	-4.2	-4.6	+6.4	+12.2	+11.4
Mining and quarrying	+0.0	-15.0	0.0	0.0	0.0	0.0	-10.0	-24.7	-5.6	-18.8
Manufacturing	+3.2	+1.1	+4.7	+4.1	+2.2	+2.2	-0.2	-1.6	+0.6	+4.7
Sugar	+3.7	+15.0	+3.7	+3.7	+3.7	+3.7	+15.0	+15.0	+15.0	+15.0
Food (exc sugar)	+7.5	+4.0	+10.2	+9.1	+4.3	+7.0	+2.5	+2.5	+3.2	+7.0
Textile	+0.0	-2.9	+6.3	-0.3	-3.2	-1.7	-5.0	-4.0	-4.0	+1.3
Other	+2.4	0.0	+2.9	+4.4	+3.2	-0.1	0.0	-5.0	0.0	+3.6
Electricity , gas and water supply	+4.0	+2.5	+5.1	+2.9	+7.7	+0.7	+1.1	+3.0	+1.1	+4.7
Construction	+11.1	+6.5	+15.8	+12.3	+11.3	+5.7	-1.0	-3.9	+7.0	+24.8
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	+4.6	+1.3	+6.9	+5.2	+4.2	+3.0	-2.4	-0.6	+2.1	+5.0
Wholesale and retail trade	+4.5	+1.0	+6.9	+5.1	+4.0	2.8	-3.0	-1.0	+1.8	4.8
Other	+7.0	+6.7	+7.0	+6.6	+7.9	+7.1	+5.5	+5.6	+7.8	+8.0
Hotels and restaurants	+2.7	-5.3	+7.0	+3.1	+2.6	-1.6	-9.8	-6.2	-9.1	+3.0
Transport , storage and communications	+6.0	+5.0	+12.0	+2.8	+4.0	+5.3	+3.0	+5.6	+6.0	+5.8
Financial intermediation	+10.8	+4.9	+10.4	+9.7	+11.0	+9.7	+5.6	+4.9	+4.3	+5.3
Insurance	+5.0	+4.0	+4.8	+4.9	+5.1	+5.1	+4.8	+4.9	+2.7	+3.7
Banks	+14.0	+5.2	+13.3	+11.8	+14.7	+12.3	+6.0	+5.0	+5.0	+5.0
Other	+7.0	+5.6	+8.0	+8.0	+7.0	+5.2	+5.0	+4.8	+5.1	+9.1
Real estate, renting and business activities	+7.6	+5.9	+8.5	+6.9	+6.8	+8.3	+6.3	+5.9	+5.6	+5.5
Owner occupied dwellings	+4.0	+3.2	+6.6	+2.2	+2.7	+4.9	+6.2	+2.4	+2.3	+1.9
Other	+10.8	+8.1	+10.2	+11.1	+10.5	+11.4	+6.4	+8.7	+8.4	+8.6
Public administration and defence; compulsory social security	+1.7	+2.5	+2.9	+3.8	-1.5	+1.6	+2.3	+2.3	+2.1	+3.0
Education	+3.4	+1.9	+3.0	+3.0	+3.0	+4.5	+2.2	+2.0	+1.6	+1.8
Health and social work	+4.6	+6.1	+5.5	+6.5	+0.1	+5.7	+4.9	+4.9	+8.1	+6.3
Other community, social and personal service activities and private households with employed persons	+8.3	+7.9	+9.0	+8.8	+9.0	+6.5	+7.9	+7.9	+6.7	+9.2
FISIM	+10.4	+5.3	+10.9	+10.0	+11.0	+9.8	+5.0	+5.0	+4.5	+6.6
Gross Domestic Product at basic prices	+5.1	+3.1	+7.6	+5.1	+4.3	+3.7	+1.2	+1.9	+3.5	+6.4
Taxes on products (net of subsidies)	+4.9	-5.0	+9.1	+13.1	+2.2	-14.5	-6.2	-13.9	-6.4	+6.7
Gross Domestic Product at market prices	+5.1	+2.2	+7.8	+5.8	+4.1	+1.8	+0.5	+0.3	+2.6	+6.4
Export Oriented Enterprises	+3.6	+0.5	+13.2	+3.9	+0.2	-1.3	-1.5	-0.8	-0.8	+5.3

Table 3 - Quarterly expenditure on Gross Domestic Product at current prices, Q₁ 2006 - Q₄ 2009

(R million)

	Year (Cumulated 4 quarters)		2006				2007			
	2006	2007	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Final consumption expenditure	174,845	196,533	41,412	41,998	42,860	48,575	46,503	47,148	48,352	54,530
Households	145,491	165,789	34,407	34,283	35,861	40,940	39,207	39,066	40,864	46,652
General Government	29,355	30,744	7,005	7,715	6,999	7,635	7,295	8,082	7,488	7,878
Gross domestic fixed capital formation	50,049	59,170	8,854	11,336	12,225	17,634	12,289	13,821	14,723	18,337
A. Building & construction work	26,705	34,903	5,438	6,737	6,972	7,557	8,069	9,123	8,585	9,126
Residential building	8,972	10,579	1,984	2,130	2,391	2,467	2,911	2,294	2,550	2,824
Non residential building	10,666	17,794	1,907	2,342	3,035	3,382	3,577	4,542	4,791	4,884
Other construction work	7,067	6,530	1,547	2,266	1,546	1,708	1,581	2,287	1,244	1,419
B. Machinery & equipment	23,344	24,267	3,416	4,599	5,253	10,077	4,220	4,698	6,137	9,211
Passenger car	2,497	3,406	616	649	595	638	733	786	848	1,039
Other transport equipment	7,620	4,948	480	509	452	6,180	530	591	656	3,171
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	<i>1,945</i>	<i>2,433</i>	<i>480</i>	<i>509</i>	<i>452</i>	<i>505</i>	<i>530</i>	<i>591</i>	<i>656</i>	<i>656</i>
Other machinery and equipment	13,227	15,913	2,320	3,441	4,207	3,259	2,957	3,321	4,634	5,001
Change in inventories	4,734	3,969	-1,422	2,286	2,122	1,748	-3,424	1,287	4,940	1,166
Exports of goods and services	127,128	138,459	30,425	28,143	31,106	37,454	32,640	31,878	33,122	40,819
Goods (f.o.b)	74,037	69,708	15,933	17,356	19,137	21,611	15,478	16,614	17,580	20,036
Services	53,091	68,751	14,492	10,787	11,969	15,843	17,162	15,264	15,542	20,783
Less Imports of goods and services	150,429	162,612	31,823	34,712	36,757	47,137	35,015	38,108	41,406	48,083
Goods (f.o.b)	108,569	113,647	22,090	25,490	26,123	34,866	23,000	26,859	29,454	34,334
Services	41,860	48,965	9,733	9,222	10,634	12,271	12,015	11,249	11,952	13,749
Gross Domestic Product at market prices	206,328	235,519	47,446	49,051	51,556	58,274	52,993	56,027	59,731	66,769

Table 3 (cont'd) - Quarterly expenditure on Gross Domestic Product at current prices, Q₁ 2006 - Q₄ 2009

(R million: million)

	Year (Cumulated 4 quarters)		2008 ¹				2009			
	2008	2009	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Final consumption expenditure	231,850	244,915	53,084	54,993	58,262	65,512	56,756	59,009	61,054	68,096
Households	196,929	204,783	45,387	46,641	49,295	55,606	47,333	48,640	51,409	57,401
General Government	34,921	40,132	7,697	8,352	8,967	9,906	9,423	10,369	9,646	10,695
Gross domestic fixed capital formation	65,176	71,846	14,756	16,528	16,360	17,531	15,686	17,222	16,427	22,511
A. Building & construction work	43,941	47,327	10,740	11,381	10,756	11,064	11,133	11,189	11,412	13,593
Residential building	13,944	15,049	3,273	3,615	3,480	3,575	3,456	3,196	4,087	4,310
Non residential building	22,162	22,016	5,444	5,355	5,797	5,565	5,540	5,055	5,324	6,097
Other construction work	7,835	10,262	2,023	2,411	1,478	1,923	2,138	2,938	2,000	3,186
B. Machinery & equipment	21,235	24,519	4,016	5,147	5,604	6,468	4,553	6,033	5,015	8,918
Passenger car	3,635	2,863	870	857	912	996	659	666	806	732
Other transport equipment	2,888	5,628	522	650	1,112	605	512	621	518	3,977
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	2,288	2,228	522	650	512	605	512	621	518	577
Other machinery and equipment	14,712	16,028	2,625	3,640	3,580	4,867	3,382	4,746	3,691	4,209
Change in inventories	6,801	-12,767	1,670	3,098	3,313	-1,281	-4,242	-2,110	-2,224	-4,191
Exports of goods and services	140,166	132,980	33,164	33,474	35,005	38,523	32,087	30,796	33,192	36,905
Goods (f.o.b)	67,970	61,784	14,157	15,900	18,055	19,858	14,262	14,714	16,211	16,597
Services	72,196	71,196	19,007	17,574	16,950	18,665	17,825	16,082	16,981	20,308
Less Imports of goods and services	179,108	162,156	41,635	44,142	45,821	47,510	35,930	38,861	39,779	47,586
Goods (f.o.b)	124,567	111,007	28,934	30,264	32,521	32,848	23,733	26,500	27,243	33,531
Services	54,541	51,149	12,701	13,878	13,300	14,662	12,197	12,361	12,536	14,055
Gross Domestic Product at market prices	264,886	274,819	61,040	63,951	67,120	72,775	64,358	66,056	68,670	75,735

1/ revised estimates 2/ first estimates

Table 4 - Expenditure on GDP - Growth rates (% over corresponding period of previous year), Q 2006 - Q4 2009

	Annual growth rate		2006				2007			
	2006	2007	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Final consumption expenditure	+5.5	+3.9	+6.0	+7.6	+5.1	+3.5	+3.1	+4.2	+5.6	+2.5
Households	+5.9	+4.5	+6.3	+8.2	+6.1	+3.3	+3.7	+5.1	+6.2	+3.2
General Government	+3.8	+0.8	+4.5	+5.4	+0.7	+4.7	+0.6	+0.8	+2.9	-0.9
Gross domestic fixed capital formation	+19.0	+8.6	+0.3	-0.5	+8.2	+59.2	+24.3	+9.7	+11.3	+1.5
A. Building & construction work	+6.7	+16.9	-1.5	+3.4	+11.0	+13.0	+32.9	+19.7	+9.7	+8.9
Residential building	+10.3	+5.5	+7.2	+61.2	-5.2	-0.2	+32.1	-4.8	-5.0	+2.5
Non residential building	+3.9	+49.2	-26.9	-12.8	+21.5	+41.1	+66.6	+71.2	+40.6	+30.8
Other construction work	+6.3	-17.4	+46.2	-9.7	+22.3	-6.4	-8.0	-10.7	-28.3	-25.6
B. Machinery & equipment	+36.9	-1.0	+3.0	-5.2	+5.1	+131.2	+12.1	-3.7	+13.1	-4.1
Passenger car	+4.2	+29.9	+16.0	-1.0	+3.9	-0.2	+15.5	+16.2	+34.7	+53.2
Other transport equipment	+296.5	-38.2	+64.7	-10.1	-12.5	+876.7	+6.1	+8.6	+33.8	-47.0
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	+8.1	+19.1	+64.7	+9.1	-12.5	+8.7	+6.1	+8.6	+33.8	+22.7
Other machinery and equipment	+3.1	+14.6	-7.6	-5.2	+8.1	+18.1	+12.5	-9.6	+7.2	+53.6
Exports of goods and services	+7.7	+3.4	+16.5	-0.3	+2.8	+11.9	-3.0	+7.1	+2.6	+7.2
Goods (f.o.b)	+10.1	-10.6	+18.9	+11.1	+0.8	+12.0	-12.8	-10.1	-11.7	-8.3
Services	+4.6	+23.0	+14.0	-14.4	+6.1	+11.9	+7.7	+34.5	+25.2	+28.1
Less Imports of goods and services	+9.3	+2.0	+15.1	-5.6	+5.3	+24.3	-0.8	+1.2	+8.2	-0.4
Goods (f.o.b)	+11.1	-1.2	+16.7	-0.8	+2.5	+27.1	-6.1	-2.9	+8.2	-3.9
Services	+5.1	+10.4	+11.6	-16.9	+13.1	+17.0	+11.4	+12.6	+8.1	+9.6

**Table 4 (cont'd) - Expenditure on GDP - Growth rates (% over corresponding period of previous year),
Q₁ 2006 - Q₄ 2009**

	Annual growth rate		2008 ¹				2009			
	2008	2009	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Final consumption expenditure	+6.0	+2.6	+6.2	+5.8	+5.1	+6.5	+1.4	+1.8	+3.5	+3.9
Households	+7.0	+2.1	+6.8	+6.8	+6.9	+7.4	+1.5	+1.6	+2.2	+2.9
General Government	+0.7	+5.4	+3.3	+1.3	-3.8	+2.0	+0.8	+2.4	+10.2	+8.5
Gross domestic fixed capital formation	+3.6	+9.1	+12.5	+15.2	+5.5	-12.0	+3.5	+0.9	-2.0	+39.4
A. Building & construction work	+13.4	+7.6	+18.8	+13.9	+13.1	+8.5	-0.4	-3.9	+8.2	+27.5
Residential building	+18.7	+7.8	0.0	+44.1	+23.4	+14.2	+1.4	-13.5	+19.7	+25.1
Non residential building	+12.2	-0.8	+36.4	+7.4	+9.1	+1.4	-2.3	-7.8	-6.4	+13.6
Other construction work	+8.1	+30.8	+13.8	-3.7	+7.3	+22.1	+1.7	+19.4	+38.6	+72.6
B. Machinery & equipment	-10.4	+12.3	+1.8	+17.5	-3.1	-29.6	+11.3	+8.6	-15.6	+55.3
Passenger car	+6.2	-23.1	+12.2	+9.4	+7.7	-13.4	-22.4	-21.4	-13.8	-35.2
Other transport equipment	-41.9	+90.1	+4.1	+23.6	+91.6	-78.1	-11.0	-20.0	-58.8	+738.3
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	-6.4	-5.0	+4.1	+23.6	-12.7	-15.0	-11.0	-20.0	-9.5	+8.0
Other machinery and equipment	-4.2	+5.8	-1.5	+18.4	-20.1	-5.8	+27.0	+21.6	+0.1	-16.0
Exports of goods and services	+2.3	-4.8	+4.6	+6.8	+6.7	-6.7	-4.7	-10.7	-6.1	+1.0
Goods (f.o.b)	+1.9	-8.8	-3.0	+1.0	+7.7	+1.2	+0.8	-9.9	-11.5	-12.4
Services	+2.6	-1.1	+11.3	+12.9	+5.7	-14.5	-9.0	-11.4	+0.1	+16.5
Less Imports of goods and services	+1.8	-4.6	+18.3	+7.4	-5.8	-8.4	-15.5	-8.3	-0.7	+5.8
Goods (f.o.b)	+1.3	-6.1	+25.0	+4.5	-6.0	-11.2	-19.6	-8.8	-4.1	+7.8
Services	+2.9	-1.2	+5.1	+14.3	-5.4	-1.1	-5.9	-7.2	+8.0	+1.4

1/ revised estimates 2/ first estimates

Concepts, data sources and methods for compiling quarterly GDP estimates

1. Concepts and definitions

The quarterly estimates have been compiled according to guidelines provided in the IMF manual entitled “Quarterly National Accounts Manual – Concepts, Data sources and Compilation”, which is itself based on the System of National Accounts 1993 (SNA 93) of the United Nations and are therefore consistent with annual estimates of the National Accounts.

2. Sources of data

The objective of the Quarterly National Accounts (QNA) is to provide the best indication of quarterly movements. Indicators for QNA have therefore been chosen according to their ability to capture the movements in the performance of the various sectors.

The main sources of data for compiling QNA estimates include quarterly production accounts of various organisations, quarterly surveys on income and expenditure among enterprises considered as drivers in specific sectors, quarterly quantity produced, quarterly expenditure of Government from the Accountant General Department, quarterly data from administrative sources such as building permits from local government, foreign trade data from the Customs Department, turnover data from the VAT systems, as well as some indirect indicators such as employment.

3. Methods used

When data on both output and input are available, the quarterly value added estimates are computed as the difference between the output and the intermediate consumption (inputs consumed in the process). When the quarterly output only is readily available or is compiled on the basis of quarterly data on quantity produced, the value added is computed using the production structure of the industry obtained at the latest Census of Economic Activities or from the latest annual production accounts available. When indicators on quarterly volume produced and price only are available, these are applied to the last quarterly value added figures to have the estimates for the quarter under review.

Constant price estimates take account of effects of prices and provide real growths. The constant price estimates are computed using the double deflation method for sectors where information on both inputs and outputs is available. In practice such data are difficult to obtain, hence ‘proxy indicators’ of volume changes are used if available, otherwise value series are deflated by an appropriate price index..

More details on the data sources and methods used for the different sectors are given in the table at section 5.

4. Seasonal adjusted quarterly GDP

The Central Statistics Office (CSO) of Mauritius has decided to increase its current outlay of statistical tables on National Accounts with the presentation of seasonally adjusted time series of quarterly national accounts estimates. However, at present only seasonally adjusted figures of value added by sector and total GDP are available. The methodology adopted in the seasonal adjustment exercise is briefly given below. Seasonally adjusted time series has historically been a common practice in analyzing business cycles. Currently this is widely use by a majority of statistical offices, central banks and policy analysts to describe and understand the most recent economic developments.

4.1 Procedures for seasonal adjustment of quarterly GDP

QNA data are subject to seasonal variations which are recurrent within a year pattern. For example, activities of “Wholesale and retail trade” are usually lowest in the first quarters, but highest in the fourth quarters in line with the high demand for consumption goods at the end of the year; activities of “Hotels and restaurants” are highest in the first and last quarters in line with high tourist arrivals during these quarters. For meaningful comparison of quarter to quarter growth, particularly for identifying turning points, the seasonal component must be removed from the data.

The procedures for carrying out the seasonal adjustment exercise are as follows:

- (i) The software, Demetra, developed by Eurostat and which includes the X-12 program has been used.
- (ii) Forward adjustment, instead of concurrent adjustment, has been used for quarterly series up to the most recently completed year, that is seasonal factors for the four quarters ahead are estimated using the X-12 procedure. When a new data point becomes available, the seasonally adjusted value of the new data point is obtained by dividing it by the appropriate forward factor if model is multiplicative or subtracting from it the appropriate forward factor if the underlying model is additive.
- (iii) The seasonal adjustment exercise has been reworked using data up to 2008. In the light of the new seasonal factors, the seasonally adjusted growth rates for year 2008 that were computed using forecast factors based on 2000 to 2007 data have been revised and are given in Table B.
- (iv) Indirect adjustment, that is seasonally adjusted GDP obtained by summation of seasonally adjusted components of GDP, has been used for the aggregate GDP.
- (v) Adjustments have been made so that the sums of quarterly seasonally adjusted data are equal to the original yearly totals.

It should be noted that different seasonal adjustment methods, no matter how carefully they have been implemented, do not always yield identical results if applied to the same time series. In addition, even if the same seasonal adjustment method is applied, there may be substantial revisions, particular towards the end of the time series, when new data are included in the calculation and taking account of possible shifts in the seasonal movements. Consequently, seasonally adjusted data remain provisional for longer than unadjusted figures, which are also subject to revisions.

5. Data sources, methods and indicators used for the estimation of quarterly GDP

The table below gives the data sources and methods used for the estimation of quarterly GDP estimates at current and constant prices by both the production and expenditure approaches.

Production approach			
Industry group	Data sources	Methods	Indicator - constant price estimates
A. Agriculture, Hunting & Forestry			
Sugar Cane	<ul style="list-style-type: none"> - Annual production and price of sugar. - Final annual production accounts. - Survey of sugar factories to have the quarterly cost structure. 	<ul style="list-style-type: none"> - Final estimates: Based on the final annual production accounts. Annual gross output and intermediate consumption are allocated to quarters according to cost structure of cane growing furnished by surveyed sugar factories. The value added is thereafter derived. - Preliminary estimates: value added for the year based on expected production and price of sugar is quarterlised using the latest value added structure. Revision is made when final accounts are available about two years later. 	<ul style="list-style-type: none"> - Final estimates: deflation of the four quarterly estimates of the year by the price deflator of the annual estimate. - Preliminary estimates: deflation of the four quarterly estimates of the year by the price of sugar for the year.

Industry group	Data sources	Methods	Indicator - constant price estimates
Tea and Tobacco	<ul style="list-style-type: none"> - Quarterly production and prices of tea from Tea Board. - Quarterly production and prices of tobacco leaves from Tobacco Board. 	<ul style="list-style-type: none"> - Gross output based on quarterly production and prices. - Value added based on annual production structure. 	<ul style="list-style-type: none"> - Deflation by component of Quarterly Producer Price Index- Agriculture (PPI-A).
Food crops	<ul style="list-style-type: none"> - Monthly quantities of food crops from Agricultural Research and Extension Unit (AREU). - Retail prices through the monthly consumer price surveys. 	<ul style="list-style-type: none"> - Value added based on quarterly quantities of food crops produced and producers' price obtained from retail prices adjusted for transport and trade margins. 	<ul style="list-style-type: none"> - Deflation by quarterly changes in the estimated producers' price based on retail prices.
Flowers and Fruits	<ul style="list-style-type: none"> - Quarterly exports of flowers from Trade Statistics supplemented by an estimate for local sales. - Monthly production of some fruits from AREU. - Quarterly production of other fruits based on the "1985 Survey of fruit trees in backyard" supplemented with data from other sources. 	<ul style="list-style-type: none"> - Value added based on quarterly sales/quantities produced and PPI-A component/producers' price obtained from retail prices adjusted for transport and trade margins. 	<ul style="list-style-type: none"> - Deflation by components of quarterly PPI-A/quarterly changes in the estimated producers' price based on retail prices.
Livestock, Poultry and Related Products	<ul style="list-style-type: none"> - Quarterly production of poultry from main breeders. - Monthly quantity of livestock slaughtered from the Mauritius Meat Authority (MMA) adjusted for illegal slaughtering. - Retail prices. 	<ul style="list-style-type: none"> - Value added based on quarterly quantities produced and on producers' price obtained from retail prices adjusted for transport and trade margins. 	<ul style="list-style-type: none"> - Deflation by quarterly changes in the estimated producers' price based on retail prices.
Government Services	<ul style="list-style-type: none"> - Expenditure of Central Government from the Accountant General Department. 	<ul style="list-style-type: none"> - Value added is estimated at cost, that is, it is equal to compensation of employees and consumption of fixed capital. 	<ul style="list-style-type: none"> - Deflation using a weighted index made up of quarterly wage rate index based on salary compensation, construction price index, price of transport equipment and machinery component of import price index.

Industry group	Data sources	Methods	Indicator - constant price estimates
B. Fishing			
Fishing	<ul style="list-style-type: none"> - Quarterly quantities of fish caught from the Albion Fisheries Research Centre (AFRC) Retail prices. 	<ul style="list-style-type: none"> - Value added based on quarterly quantities of fish caught and producers' price obtained from retail prices adjusted for trade margins. 	<ul style="list-style-type: none"> - Deflation by quarterly changes in the estimated producers' price based on retail prices.
C. Mining & Quarrying			
Mining & Quarrying	<ul style="list-style-type: none"> - Quarterly quantities of salt produced and sand extracted, and their prices through surveys of establishments. 	<ul style="list-style-type: none"> - Value added derived using data collected from quarterly surveys 	<ul style="list-style-type: none"> - Deflation by change in producer prices.
	<ul style="list-style-type: none"> - Annual production accounts of decorative rocks through survey of establishments. 	<ul style="list-style-type: none"> - Annual estimates of value added evenly distributed over the 4 quarters. 	<ul style="list-style-type: none"> - Deflation by wage increase due to salary compensation of July of every year.
D. Manufacturing			
Sugar Milling	<ul style="list-style-type: none"> - Annual production and price of sugar. - Final annual production accounts. - Survey of sugar factories to have the quarterly cost structure. 	<ul style="list-style-type: none"> - Final estimates: Based on the final annual production accounts; Annual gross output and intermediate consumption are allocated to quarters according to cost structure of sugar milling activities furnished by surveyed sugar factories. The value added is thereafter derived. - Preliminary estimates: value added for the year based on expected production and price of sugar is quarterlised using the last quarterly value added structure. Revision is made when final accounts are available about two years later. 	<ul style="list-style-type: none"> - Final estimates: deflation of the four quarterly estimates of the year by the price deflator of the annual estimate. - Preliminary estimates: deflation of the four quarterly estimates of the year by the price of sugar for the year.
EPZ	<ul style="list-style-type: none"> - Quarterly exports from Trade statistics. - Quarterly turnover from the Value Added Tax (VAT) Department and the Large Taxpayers' Department (LTD). - Level of stock from quarterly stock surveys. 	<ul style="list-style-type: none"> - Quarterly value added based on quarterly gross output compiled from these sources and last annual technical ratio. 	<ul style="list-style-type: none"> - Volume index from Quarterly Index of Industrial Production (QIIP).
Non – EPZ	<ul style="list-style-type: none"> - Quarterly exports from Trade Statistics - Quarterly turnover from the VAT and LTD Departments - Production of excisable goods from Customs and Excise Department - Level of stock from quarterly stock surveys 	<ul style="list-style-type: none"> - “Large” establishments (those with 10 persons or more engaged): Quarterly value added estimates based on quarterly gross output compiled from these sources and last annual technical ratio. - Small establishments: Quarterly value added estimates based on the same quarterly trends as “Large establishments” 	<ul style="list-style-type: none"> - Volume index based on Quarterly Index of Industrial Production (QIIP) adjusted for small establishments.

Industry group	Data sources	Methods	Indicator - constant price estimates
E. Electricity, Gas & Water Supply			
Electricity, Gas & Water Supply	<ul style="list-style-type: none"> - Quarterly production accounts from Central Electricity Board (CEB) and Central Water Authority (CWA) 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts. 	<ul style="list-style-type: none"> - Volume based on quarterly quantity of electricity and water sold.
	<ul style="list-style-type: none"> - Quarterly production data of the Independent Power Producers 	<ul style="list-style-type: none"> - Value added derived from the value of electricity purchased by CEB and quarterly technical ratio of the previous year. 	
F. Construction			
Construction	<ul style="list-style-type: none"> - Monthly building permits from Municipalities and District Councils - Quarterly capital expenditure estimates of General Government from Accountant General Department - Maintenance expenditure by Government based on quarterly output of the Ministry of Public Infrastructure from Accountant General Department - Maintenance expenditure by households from latest Household Budget Survey 	<ul style="list-style-type: none"> - Quarterly output based on these sources and quarterly value added derived using the production structure obtained at the 2002 CEA. 	<ul style="list-style-type: none"> - Deflation by quarterly Construction Price Index.
G. Wholesale & Retail Trade, Repair of Motor Vehicles, Motorcycles, Personal & Household Goods			
Wholesale & Retail Trade	<ul style="list-style-type: none"> - Quarterly imports from Trade statistics - Local production from Agriculture statistics and Industrial statistics 	<ul style="list-style-type: none"> - For imported goods, gross output based on trade margins computed from quarterly imports. For local production, gross output based on trends of production of food crops and production of the non-EPZ sector. - Value added derived using the production structure obtained at the 2002 CEA. 	<ul style="list-style-type: none"> - Deflation by CPI.
Repair Services		Annual estimates divided by 4.	<ul style="list-style-type: none"> - Deflation by CPI.

Industry group	Data sources	Methods	Indicator - constant price estimates
H. Hotels & Restaurants			
Hotels & Restaurants	<ul style="list-style-type: none"> - Quarterly tourist arrivals from Tourism statistics - Quarterly tourist earnings from Bank of Mauritius - Expenditure on food and accommodation by tourists from Survey of tourist expenditure 	<ul style="list-style-type: none"> - Gross output based on quarterly estimates of expenditure on food and accommodation derived from quarterly tourist earnings and pattern of expenditure of tourists. - Value added is estimated using the production structure obtained from latest available annual production accounts. 	<ul style="list-style-type: none"> - Volume based on quarterly tourist arrivals.
- I. Transport, Storage & Communication			
Land Transport			
Bus	<ul style="list-style-type: none"> - Quarterly production accounts of bus companies from National Transport Authority (NTA) 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts 	<ul style="list-style-type: none"> - Double deflation using bus fare for output and relevant CPI components for inputs.
Taxi	<ul style="list-style-type: none"> - Quarterly licences of taxi cars from NTA - Taxi fares from monthly consumer price surveys. 	<ul style="list-style-type: none"> - Output based on the quarterly number of licences delivered and taxi fare. - Value added derived using the production structure obtained at the 2002 CEA. 	<ul style="list-style-type: none"> - Double deflation using CPI relevant components for inputs and taxi fare for output.
Lorries	<ul style="list-style-type: none"> - Quarterly tonnage of goods loaded and unloaded from Civil Aviation Department and Customs Department - Lorry charges based on CEA and inflation. 	<ul style="list-style-type: none"> - Output based on the quarterly volume of goods transported and lorry charges. - Value added derived using the structure obtained at the 2002 CEA. 	<ul style="list-style-type: none"> - Double deflation using relevant CPI components for both output and inputs.
Water transport	<ul style="list-style-type: none"> - Quarterly number of passengers from Mauritius Shipping Corporation. 	<ul style="list-style-type: none"> - The number of passengers and fares charged as per CPI are used to estimate quarterly output. - Value added is derived using the production structure obtained at the 2002 CEA. 	<ul style="list-style-type: none"> - Volume based on number of passengers.
Air transport	<ul style="list-style-type: none"> - Quarterly receipts and expenditure from Air Mauritius Ltd. 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts 	<ul style="list-style-type: none"> - Double deflation using airfare index for output and relevant CPI components for inputs.

Industry group	Data sources	Methods	Indicator - constant price estimates
Services allied to transport	<ul style="list-style-type: none"> - Quarterly receipts and expenditure from Mauritius Ports Authority (MPA) and Cargo Handling Corporation (CHC). - Quarterly indicators such as aircraft landings and take offs, and tourist arrivals and Mauritian travelling abroad. 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts where available. - For other activities, annual estimates are quarterlised using the quarterly indicators. 	<ul style="list-style-type: none"> - Volume based on tonnage of goods loaded and unloaded. - Volume based on quarterly indicators.
Telecommunications services	<ul style="list-style-type: none"> - Quarterly receipts and expenditure of Mauritius Telecoms Ltd (MT). 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts. 	<ul style="list-style-type: none"> - Deflation by changes in the price of telephone calls.
J. Financial Intermediation			
Financial Intermediation	<ul style="list-style-type: none"> - Quarterly survey among all offshore and commercial banks, and insurance companies. 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts. 	<ul style="list-style-type: none"> - Banks: Double deflation using changes in interest rates for output and inflation for inputs - Insurance sector: Volume based on changes in the number of vehicles.
K. Real Estate, Renting & Business Activities			
Ownership of dwellings	<ul style="list-style-type: none"> - Number of housing units (Hu) from Housing Census - Expenditure by household on rent from household budget survey. 	<ul style="list-style-type: none"> - Output based on imputed rent of owner occupied dwellings estimated as the product of number of Hu and rent per Hu. - Value added is derived after deducting from the output, expenses on maintenance of residential buildings. 	<ul style="list-style-type: none"> - Deflation by quarterly Construction Price Index.
Renting and Business services	<ul style="list-style-type: none"> - Trends in related sectors. - Indirect indicators such as no. of cases lodged in court and tourist arrivals. 	<p>This sector comprises units which offer their services to different activities, both offshore and onshore. Their output consequently follow that of the respective activity groups.</p>	<ul style="list-style-type: none"> - Deflation by CPI.
L. Public Administration & Defence; Compulsory Social Security			
Public Administration and Defence; Compulsory Social Security	<ul style="list-style-type: none"> - Expenditure of Central Government from the Accountant General Department. 	<ul style="list-style-type: none"> - Estimates are made at cost, that is, the gross output is equal to the purchase of goods and services, compensation of employees and consumption of fixed capital; value added is equal to compensation of employees and consumption of fixed capital. 	<p>Deflation using a weighted index made up of quarterly wage rate index based on salary compensation, construction price index, price of transport equipment and machinery component of import price index.</p>

Industry group	Data sources	Methods	Indicator - constant price estimates
M. Education services			
Education Services	<ul style="list-style-type: none"> - Expenditure of Ministry of Education from the Accountant General Department. 	<ul style="list-style-type: none"> - Value added for education services provided by Government is estimated at cost, that is, it is equal to compensation of employees and consumption of fixed capital. 	Deflation using a weighted index made up of quarterly wage rate index based on salary compensation, construction price index, price of transport equipment and machinery component of import price index.
	<ul style="list-style-type: none"> - Annual data on enrolment from the Ministry of Education - Enrolment from private schools and Industrial Vocational Training Board (IVTB) - % change in fees charged for private tuition estimated from the sub-index for "Education" obtained from the CPI Unit 	<ul style="list-style-type: none"> - Private schools and IVTB: annual output is divided by 4. - Private tuition fees: output based on ten months only (February to November) are quarterlised accordingly. 	Volume based on enrolment statistics.
N. Health and Social Work			
Health and Social Work	<ul style="list-style-type: none"> - Expenditure of Ministry of Health from the Accountant General Department. 	<ul style="list-style-type: none"> - Value added for health services provided by Government is estimated at cost, that is, it is equal to compensation of employees and consumption of fixed capital. 	<ul style="list-style-type: none"> - Deflation using a weighted index made up of quarterly wage rate index based on salary compensation, construction price index, price of transport equipment and machinery component of import price index.
	<ul style="list-style-type: none"> - Annual production accounts of clinics. - Quarterly data on admissions in clinics and hospitals from the Ministry of Health. - No. of private medical practitioners from the Ministry of Health. - Fees charged from monthly consumer price surveys. 	Annual value added for private health services are computed using available production accounts of clinics and supplemented with indicators on private practitioners. The estimates are quarterlised using quarterly data on admissions to clinics and hospitals.	<ul style="list-style-type: none"> - Deflation by CPI component.

Industry group	Data sources	Methods	Indicator - constant price estimates
- O. Other Community, Social & Personal Services			
Sanitary Services	<ul style="list-style-type: none"> - Quarterly production accounts of Waste Water Authority. - Quarterly surveys among a sample of private companies. 	<ul style="list-style-type: none"> - Value added compiled from quarterly accounts. 	<ul style="list-style-type: none"> - Deflation by CPI.
Amusement and Recreational Activities	<ul style="list-style-type: none"> - Monthly data from the VAT Department 	<ul style="list-style-type: none"> - Quarterly gross output derived from the VAT returns. - Value added estimated using technical coefficients obtained from latest available annual final production accounts. 	<ul style="list-style-type: none"> - Deflation by CPI.
Personal Services.	<ul style="list-style-type: none"> - Quarterly turnover from the VAT department - Demographic statistics such as births, deaths and marriages - Tourist arrivals 	<ul style="list-style-type: none"> - Quarterly gross output derived from the VAT returns. - Quarterly value added estimated using technical coefficients obtained from latest available annual final production accounts. - For companies not registered at the VAT: annual estimates are quarterlised using indirect indicators such as quarterly number of births, deaths, marriages, and tourist arrivals. 	<ul style="list-style-type: none"> - Deflation by CPI.
P. Private Households with Employed Persons			
Private households with employed persons	<ul style="list-style-type: none"> - Number of employees based on number of household with domestic employees as collected in Household Budget Survey (HBS). - Wage Rate from monthly consumer price surveys. 	<ul style="list-style-type: none"> - Annual estimate based on the number of persons employed and average wage divided by 4. 	<ul style="list-style-type: none"> - Deflation by wage increase due to salary compensation of July of every year.

Data sources, methods and indicators used for the estimation of quarterly GDP
Expenditure approach

Item	Sources & Methodology	Indicator – constant price estimates
Final Consumption Expenditure - Household (HH)	Annual estimates are quarterlised using Continuous Multi-Purpose Household Survey (CMPHS) and HBS structure adjusted for conceptual difference with national accounts.	- Deflation by CPI.
Final Consumption Expenditure – General Government	Government consumption expenditure is equal to the output (compensation of employees, consumption of capital and value of goods and services purchased) of General Government calculated at cost less goods or services sold plus expenditure on social benefits in kind. All data are available on a quarterly basis at the Accountant General Department, except consumption of capital, which is worked out by dividing the available annual estimate by 4.	- Deflation using a weighted index made up of quarterly wage rate index based on salary compensation, construction price index, price of transport equipment, machinery component of import price index and CPI.

Gross Domestic Fixed Capital Formation (GDFCF)		
Building and Construction		
Item	Sources & Methodology	Indicator – constant price estimates
Residential Building	Quarterly investment in residential buildings based on quarterly data on floor area from building permits (with a lag of 1 quarter) and quarterly Construction Price Index, together with quarterly data from National Housing Development Company (NHDC) and an estimate for projects for which no permit has been issued.	- Deflation by quarterly construction price index.
Non-Residential Building and Other Construction Work	Quarterly investment in non-residential buildings and other construction work based on quarterly building permits for non-residential buildings (lag by one quarter) and quarterly Construction Price Index, work in progress of large projects and quarterly data on Government capital expenditure available from the Accountant General Department.	

Machinery and Equipment		
Item	Sources & Methodology	Indicator – constant price estimates
Aircraft	Based on information provided by Air Mauritius Ltd	Exchange rate of the currency in which asset is purchased.
Marine Vessel	Based on information provided by Mauritius Ports Authority (MPA)	
Transport Equipment	Based on information on registered vehicles provided by National Transport Authority (NTA) classified as final consumption expenditure or investment according to purchasers. For transport equipment for which no registration is necessary, imports statistics are used.	- CPI component for car.
Other Machinery and Equipment.	<p>Estimates are mostly based on quarterly Trade Statistics given that most of the machinery and equipment are imported. The imported machinery and equipment goods are brought to purchasers' prices by adding all duties and taxes, landing cost, transport cost and margins. Duties and taxes are available from Customs Department, landing cost from Mauritius Ports Authority while rates of transport and margin are based on the results of the 2002 CEA. Annual installation cost obtained through surveys is quarterlised according to the quarterly trend of concerned machinery.</p> <p>Local production of machinery is estimated from outputs of companies producing capital goods.</p>	- Quarterly Import Price Index.

Exports and Imports of Goods and Services	Data available from the Quarterly Balance of Payments (BOP) of the Bank of Mauritius (BOM).	- Deflation using quarterly import and export price indices.
---	---	--