

Quarterly National Accounts

Third Quarter 2010

Introduction

This issue of Economic and Social Indicators on Quarterly National Accounts (QNA) presents quarterly estimates of GDP for first quarter 2007 to the third quarter of 2010. 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 2003 to the third quarter of 2010, 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. Revisions in this issue

The quarterly estimates of value added presented in this issue have been updated based on the results of the 2007 Census of Economic Activities (CEA), and are therefore not strictly comparable with series published earlier, which were based on the 2002 CEA. Furthermore, some conceptual and methodological improvements as well as improvements in data sources have been made during the rebasing exercise.

More details on the exercise are given in the Annex - "Concepts, data sources and methods for compiling quarterly GDP estimates". Henceforth, all quarterly National Accounts data will be reported on the basis of the rebased series.

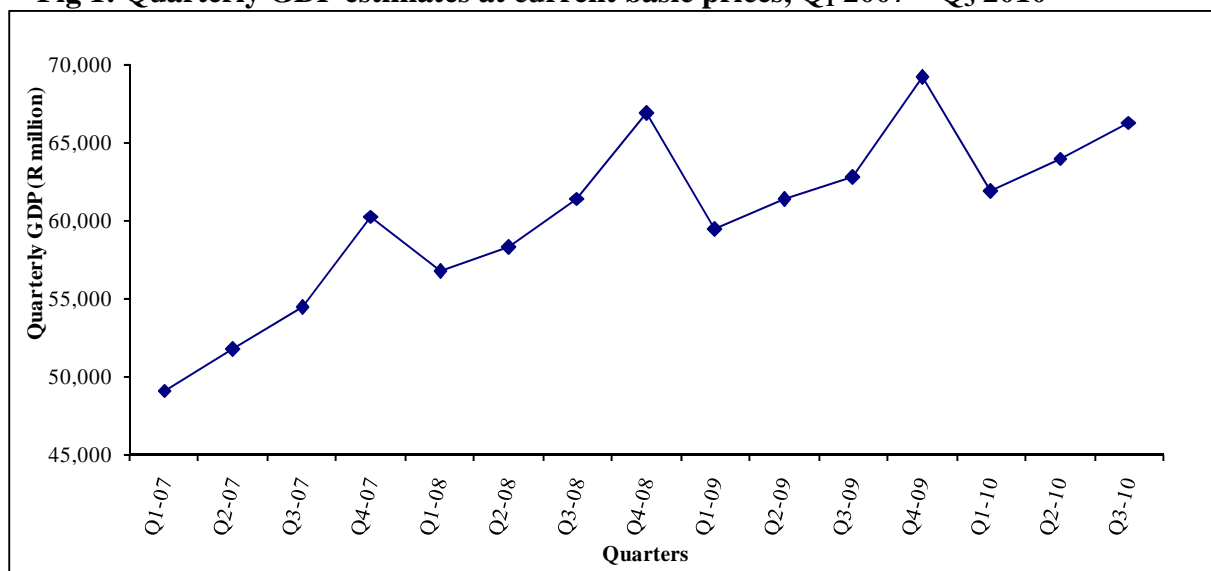
The revised series for 1999 to 2006 will be posted on the CSO's website in mid January 2011.

3. Quarterly GDP estimates at current prices

3.1 Overall GDP

Figure 1 shows the rebased quarterly GDP estimates at basic prices for first quarter 2007 to the third quarter of 2010. 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 2009, GDP at current basic prices which stood at R 59,426 million in the first quarter, increased to R 61,328 million in the second and to R 62,728 million in the third to peak at R 69,110 million in the fourth quarter. It then declined to R 61,804 million in the first quarter of 2010.

Fig 1: Quarterly GDP estimates at current basic prices, Q₁ 2007 – Q₃ 2010



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 2007 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 third quarter of 2010 is estimated at R 66,245 million compared to R 63,945 million in the previous quarter and to R 62,728 million in the corresponding quarter of 2009.

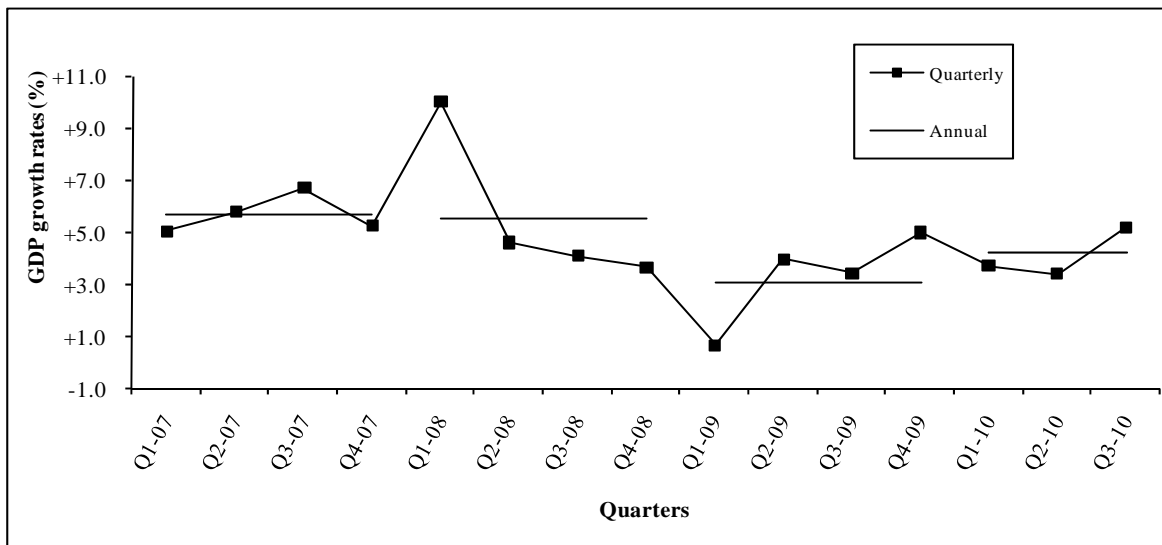
4. Quarterly GDP growth rates (based on data unadjusted for seasonality) – Table 2

4.1 Growth rates, Q₁2007 – Q₃2010, (year on year change)

Table 2 shows year on year quarterly growth rates by industry group for the period first quarter of 2007 to the third quarter of 2010. 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 2007 to third quarter 2010 and the annual rates for 2007 to 2009. As indicated by the annual GDP growth rates, the economy grew by 5.7% and 5.5% in 2007 and 2008. A lower growth of 3.1% was registered for 2009. In 2010, GDP growth is estimated at 4.2%.

Fig. 2: GDP growth rates, quarterly (percentage change over corresponding period of previous year) and annual, Q₁ 2007 – Q₃ 2010



Quarterly data indicate that after growths oscillating between 5.0% and 6.7% during the four quarters of 2007, GDP peaked at 10.0% in the first quarter of 2008. This was followed by low growths reaching 0.7% in the first quarter of 2009. Thereafter, the economy picked up to reach 5.0% in the last quarter of 2009 to slow down again registering growths of 3.7% and 3.4% in the first and second quarter of 2010. Growth rate for the third quarter improved to 5.2%.

4.2 Growth rates, second quarter 2010 over second quarter 2009

Based on latest available information, GDP growth for the second quarter of 2010 over the corresponding quarter of 2009 has been revised downwards to 3.4% from 3.8% as estimated in September 2010. At sectoral level, higher growths were observed in “Electricity, gas and water”, “Real estate, renting and business activities”, “Public administration”, “Education” and “Health and social work”. Most of the remaining sectors have recorded declines.

4.3 Growth rates, third quarter 2010 over third quarter 2009

GDP growth rate for the third quarter of 2010 over the corresponding quarter of 2009 is estimated at 5.2%. Growths were registered in all sectors.. Growths by industry group were as follows:

“Agriculture, hunting, forestry and fishing” grew by 7.8% in the third quarter of 2010 as opposed to the decline of 4.0% in the previous quarter. The growth of 7.8% was the result of growths of 12.1% in “Other agriculture” and 0.8% in “Sugar cane”.

“Manufacturing” grew by 0.7% in the third quarter of 2010, lower than the growth of 1.5% in the second quarter of 2010.

“Electricity, gas and water supply” grew by 3.7% in the third quarter of 2010 compared to 4.3% in the previous quarter.

“Construction” grew by 13.0% in the third quarter of 2010, higher than the growth of 5.5% noted for the second quarter.

“Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods” grew by 4.7% in the third quarter of 2010, higher than the growth of 1.8% in the second quarter of 2010.

“Hotels and restaurants” grew further by 4.4% in the third quarter of 2010 after the growth of 3.0% noted the second quarter of 2010.

“Transport, storage and communications” recorded a growth of 5.4% in the third quarter of 2010 following a growth of 4.8% in the second quarter of 2010.

“Financial intermediation” grew by 6.0% in the second quarter of 2010, higher than the growth of 3.9% registered for the second quarter of 2010.

“Real estate, renting and business activities” increased by 6.5%, higher than the growth of 5.9% in the second quarter of 2010.

“Public administration and defence; compulsory social security” grew by 3.7% in the third quarter of 2010 compared to a growth of 2.9% in the second quarter of 2010.

“Education” grew by 3.6% in the third quarter of 2010 slightly lower than the 3.9% growth of in the previous quarter.

“Health and social work” grew at a higher rate of 8.3% in the third quarter of 2010 compared to a growth of 4.9% in the second quarter of 2010.

“Other community, social and personal service activities and private households with employed persons” grew by 8.1% in the third quarter of 2010 compared to a growth of 7.0% in the second quarter of 2010.

4.4 Contribution of industry groups to GDP growth, third quarter 2010

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 5.2% growth in GDP during the third quarter of 2010 were “Construction” (0.9 percentage point) and “Real estate, renting and business activities” (0.8 percentage point).

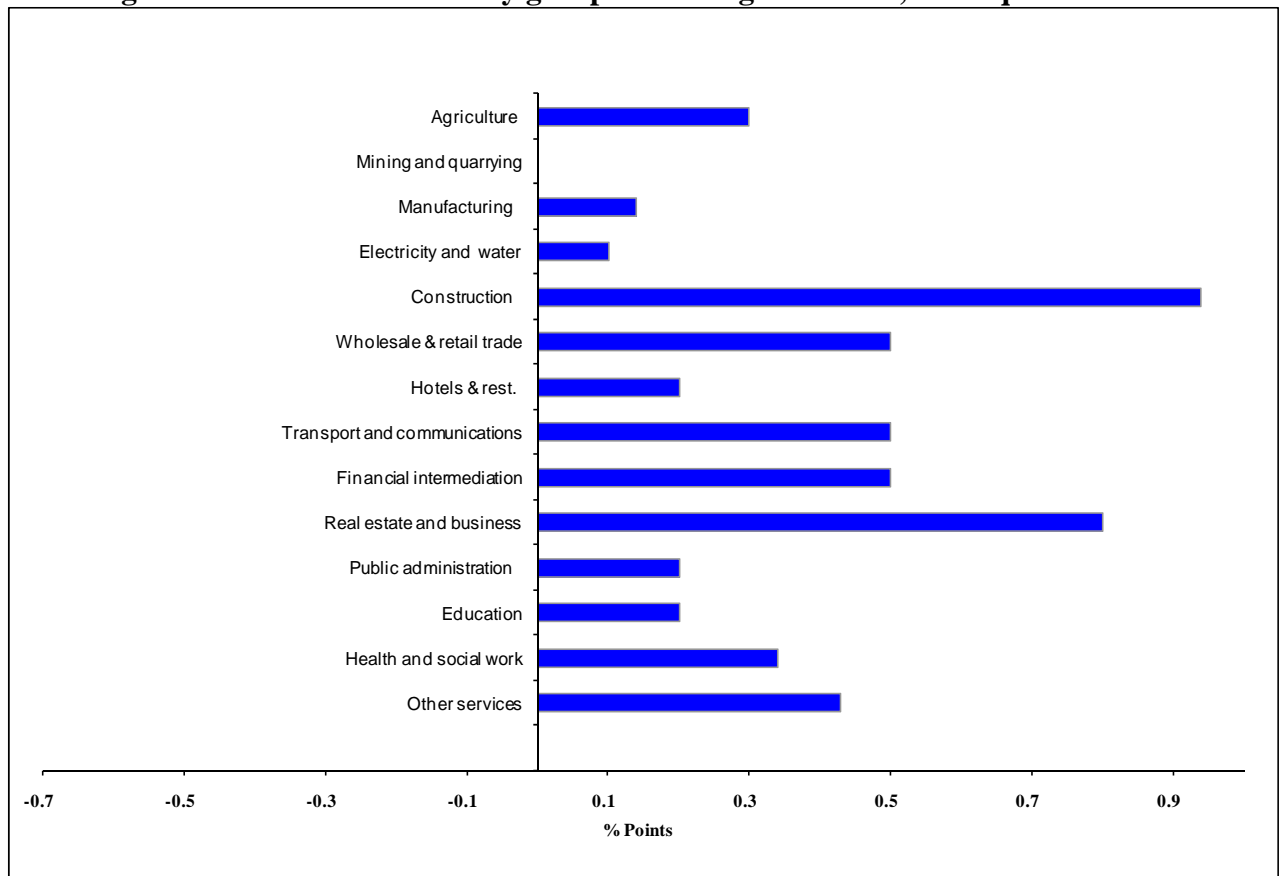
Contributions of the other industry groups ranged from 0.1 to 0.5 percentage point except for “Mining and quarrying” whose contribution was almost negligible.

Table A: Contribution of industry groups to GDP growth (percentage point), Q₁ 2009 – Q₃ 2010

Industry	Contribution to GDP growth						
	Q ₁ 2009	Q ₂ 2009	Q ₃ 2009	Q ₄ 2009	Q ₁ 2010	Q ₂ 2010	Q ₃ 2010
Agriculture, hunting, forestry and fishing	0.3	0.5	0.4	0.4	-0.2	-0.1	0.3
Mining and quarrying	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.0	0.1	0.8	0.8	1.6	0.3	0.1
Electricity , gas and water supply	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Construction	-0.1	-0.3	0.5	1.5	-0.5	0.4	0.9
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	-0.2	1.3	-0.4	-0.2	0.5	0.2	0.5
Hotels and restaurants	-1.4	0.2	0.3	-0.7	0.4	0.2	0.2
Transport , storage and communications	0.3	0.3	0.4	0.9	0.2	0.4	0.5
Financial intermediation	0.5	0.3	0.0	0.7	-0.1	0.3	0.5
Real estate, renting and business activities	0.6	0.6	0.7	0.8	0.8	0.7	0.8
Public administration and defence; compulsory social security	0.1	0.1	0.1	0.0	0.2	0.2	0.2
Education	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Health and social work	0.2	0.2	0.3	0.2	0.2	0.2	0.3
Other community, social and personal service activities and private households with employed persons	0.2	0.3	0.4	0.4	0.3	0.3	0.4
GDP at basic prices published	0.7	4.0	3.4	5.0	3.7	3.4	5.2

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, third quarter 2010



5. Quarterly GDP by expenditure

5.1 Quarterly expenditure components at current prices

During the third quarter of 2010, final consumption expenditure which comprises consumption expenditure of private households and general government, amounted to R 65,002 million, representing 88.2% of the quarterly GDP at market prices. Final consumption of households estimated at R 55,302 million represented 75.0% of the quarterly GDP, and that of general government estimated at R 9,700 million was 13.2% of the GDP (Table 3).

Analysis of quarterly data from 2007 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.

5.2 Quarterly growth rates of expenditure components, third quarter 2010

Analysis of year on year quarterly GDP by expenditure shows that total final consumption expenditure registered a growth of 3.1% in the third quarter of 2010, higher than the 2.6% growth in the second quarter of 2010 (Table 4). The final consumption expenditure of households grew by 3.1% in the third quarter of 2010 compared to 2.6% in the previous quarter while that of general government grew by 2.8% following a growth of 2.5% in the second quarter of 2010.

During the third quarter of 2010, investment grew by 8.0%, higher than the growth of 6.7% registered for the second quarter. This growth of 8.0% is explained by a higher growth of 15.7% in “Building and construction work”, partly offset by a decline of 8.4% in “Machinery and equipment”.

The growth of 15.7% in “Building and construction work” in the third quarter of 2010 was mainly attributable to growths of 61.4% and 9.2% in “Other construction work” and “Residential building” respectively. The decline of 8.4% in “Machinery and equipment” is explained by a contraction of 12.6% in “Other machinery and equipment”, partly offset by a growth of 25.0% in “Other transport equipment”.

Both exports and imports of goods and services continued in their increasing trend with positive growths since the last quarter of 2009. Exports of goods and services grew by 14.2% following the growth of 23.8% in the second quarter. This is explained by growths of 17.7% and 11.0% in exports of goods and exports of services respectively.

Imports of goods and services grew by 9.9% in the third quarter of 2010, slightly higher than the growth of 9.6% in the previous quarter. The 9.9% growth is attributable to growths in both imports of goods (+6.9%) and imports of services (+16.5%).

6 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 2003 to the third quarter of 2010.

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.

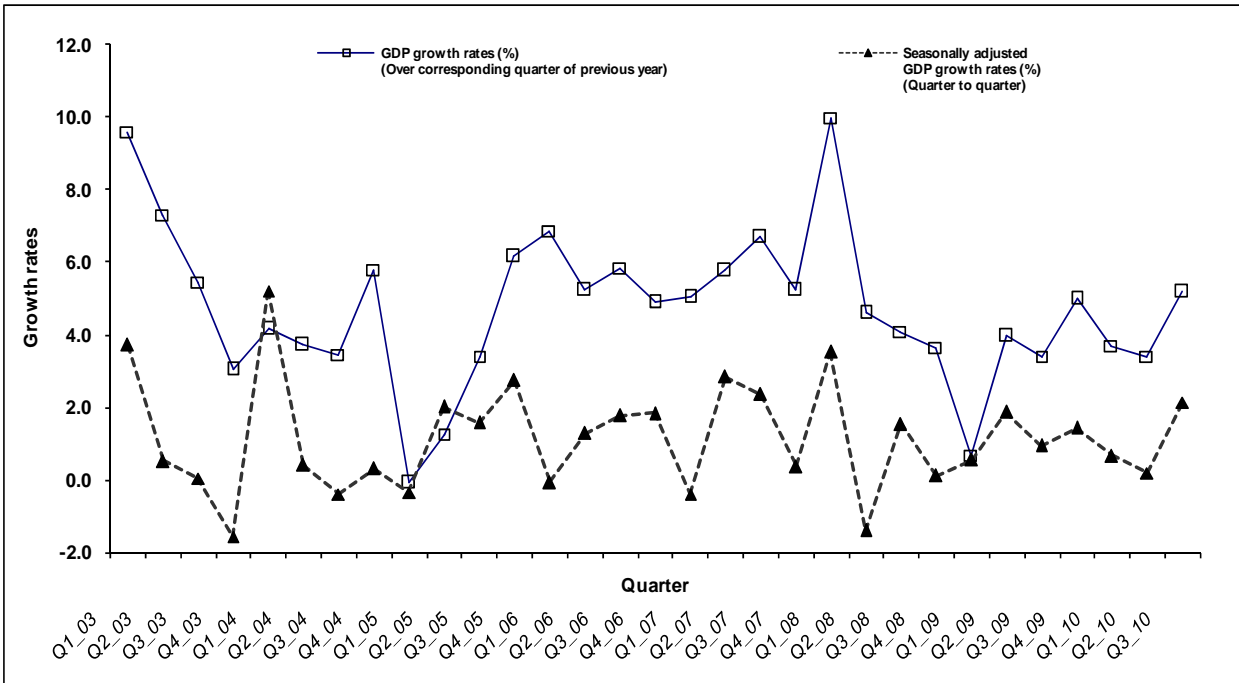
Quarter to quarter GDP growth rates based on seasonally adjusted data show that the economy grew by 2.1% in the third quarter of 2010 compared to 0.7% and 0.2% in the first and second quarter of 2010 respectively.

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 2003 – Q₃ 2010

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_03	9.6	3.7	Q1_07	5.0	-0.4
Q2_03	7.3	0.5	Q2_07	5.8	2.8
Q3_03	5.4	0.0	Q3_07	6.7	2.4
Q4_03	3.0	-1.6	Q4_07	5.2	0.4
Q1_04	4.2	5.2	Q1_08	10.0	3.5
Q2_04	3.7	0.4	Q2_08	4.6	-1.4
Q3_04	3.5	-0.4	Q3_08	4.1	1.5
Q4_04	5.8	0.3	Q4_08	3.7	0.1
Q1_05	-0.1	-0.3	Q1_09	0.7	0.6
Q2_05	1.3	2.0	Q2_09	4.0	1.9
Q3_05	3.4	1.6	Q3_09	3.4	0.9
Q4_05	6.2	2.7	Q4_09	5.0	1.4
Q1_06	6.9	-0.1	Q1_10	3.7	0.7
Q2_06	5.2	1.3	Q2_10	3.4	0.2
Q3_06	5.8	1.8	Q3_10	5.2	2.1
Q4_06	4.9	1.8			

Figure 4: GDP growth rates (over corresponding quarter of previous year and quarter to quarter), Q₁ 2003 – Q₃ 2010.



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. The total amount is allocated as intermediate consumption of business, final consumption of household, government and exports and imports of non-residents.

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

**Central Statistics Office
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Table 1 - Quarterly Gross Domestic Product by industry group at current basic prices, Q₁ 2007 - Q₃ 2010

(R million)

	Year (Cumulated 4 quarters)		2007 ¹				2008 ¹			
	2007	2008	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Agriculture, hunting, forestry and fishing	9,652	9,942	1,894	1,967	2,513	3,277	2,058	2,073	2,571
Sugarcane	4,333	4,230	765	840	1,057	1,670	761	824	1,021	1,624
Other	5,319	5,713	1,129	1,127	1,456	1,607	1,297	1,249	1,550	1,617
Mining and quarrying	79	108	18	17	19	24	29	31	25	23
Manufacturing	41,409	47,127	8,381	10,177	10,659	12,192	9,908	11,470	11,825	13,924
Sugar	1,175	1,141	206	325	324	320	200	315	314	311
Food (exc sugar)	12,226	15,943	2,241	3,127	2,991	3,866	3,091	3,980	3,866	5,005
Textile	14,692	13,882	3,230	3,912	3,795	3,756	3,147	3,638	3,418	3,678
Other	13,316	16,162	2,704	2,814	3,549	4,249	3,469	3,536	4,227	4,929
Electricity , gas and water supply	3,321	4,590	835	744	809	933	1,044	1,160	1,204	1,183
Construction	13,282	16,472	3,080	3,442	3,276	3,485	4,032	4,263	4,056	4,121
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	25,693	29,029	5,225	6,137	6,788	7,543	6,390	6,593	7,467	8,579
Wholesale and retail trade	23,483	26,379	4,850	5,562	6,303	6,768	5,923	5,893	6,867	7,696
Other	2,210	2,650	375	575	485	775	467	700	600	883
Hotels and restaurants	18,672	19,171	5,053	4,067	3,862	5,690	5,684	4,703	3,898	4,886
Transport , storage and communications	23,789	23,923	5,768	5,324	6,176	6,522	6,157	5,344	6,067	6,355
Financial intermediation	20,827	23,909	4,916	4,912	5,403	5,596	5,558	5,600	6,424	6,326
Insurance	5,850	6,466	1,170	1,310	1,700	1,670	1,437	1,540	1,796	1,693
Banks	12,177	14,241	3,134	2,911	2,976	3,156	3,406	3,262	3,803	3,769
Other	2,800	3,202	612	691	727	770	715	798	825	864
Real estate, renting and business activities	22,784	27,258	5,457	5,668	5,717	5,942	6,559	6,786	6,873	7,039
Owner occupied dwellings	9,633	10,832	2,302	2,382	2,429	2,521	2,622	2,684	2,766	2,760
Other	13,151	16,426	3,155	3,286	3,288	3,421	3,937	4,103	4,107	4,280
Public administration and defence; compulsory social security	12,041	13,780	2,850	3,124	3,005	3,062	2,981	3,290	3,659	3,851
Education	8,948	10,273	2,113	2,285	2,313	2,236	2,295	2,481	2,765	2,731
Health and social work	6,713	7,730	1,583	1,718	1,720	1,692	1,728	1,894	2,015	2,093
Other community, social and personal service activities and private households with employed persons	8,239	9,804	1,896	2,141	2,142	2,061	2,255	2,543	2,552	2,453
Gross Domestic Product at basic prices	215,449	243,115	49,069	51,724	54,401	60,255	56,678	58,231	61,401	66,806
Taxes on products (net of subsidies)	28,549	31,201	6,538	6,688	6,916	8,407	7,547	7,881	7,698	8,075
Gross Domestic Product at market prices	243,998	274,316	55,607	58,412	61,318	68,662	64,225	66,112	69,099	74,880
Export Oriented Enterprises	17,795	17,839	3,817	4,714	4,642	4,622	4,007	4,607	4,432	4,793

1/ revised estimates

Table 1 - (cont'd) Quarterly Gross Domestic Product by industry group at current basic prices, Q₁ 2007 - Q₃ 2010

(R million)

	2009	2009 ¹				2010		
		Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ²
Agriculture, hunting, forestry and fishing	9,800	2,023	2,106	2,559	3,111	2,005	2,015	2,509
Sugarcane	3,489	611	656	841	1,381	484	526	684
Other	6,311	1,412	1,451	1,718	1,731	1,521	1,489	1,824
Mining and quarrying	101	28	25	25	23	25	29	27
Manufacturing	48,412	10,515	11,823	12,078	13,996	11,310	11,778	12,242
Sugar	988	174	273	272	269	145	229	228
Food (exc sugar)	16,361	3,454	4,148	3,956	4,802	4,017	4,361	4,162
Textile	14,122	3,119	3,858	3,472	3,674	2,910	3,063	3,326
Other	16,940	3,768	3,544	4,377	5,251	4,238	4,125	4,526
Electricity , gas and water supply	5,657	1,445	1,302	1,438	1,472	1,443	1,361	1,381
Construction	17,486	4,115	4,166	4,243	4,962	3,778	4,411	4,828
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	28,800	6,261	7,382	7,208	7,949	6,311	7,384	7,641
Wholesale and retail trade	25,850	5,751	6,602	6,548	6,949	5,740	6,511	6,902
Other	2,950	510	780	660	1,000	571	873	739
Hotels and restaurants	16,754	4,888	3,685	3,379	4,801	5,303	4,051	3,793
Transport , storage and communications	24,317	5,869	5,454	6,165	6,828	6,392	5,651	6,279
Financial intermediation	25,411	6,190	5,934	6,639	6,649	5,669	6,413	7,084
Insurance	7,060	1,576	1,637	1,842	2,005	1,600	1,800	2,100
Banks	14,851	3,846	3,502	3,887	3,617	3,269	3,813	3,984
Other	3,500	768	795	910	1,027	800	800	1,000
Real estate, renting and business activities	29,653	7,168	7,397	7,445	7,642	7,850	8,081	8,143
Owner occupied dwellings	11,191	2,742	2,781	2,828	2,840	2,875	2,897	2,948
Other	18,462	4,426	4,616	4,617	4,802	4,975	5,183	5,195
Public administration and defence; compulsory social security	15,322	3,686	4,082	3,666	3,889	3,870	4,291	3,882
Education	11,084	2,628	2,828	2,832	2,796	2,744	2,975	2,976
Health and social work	8,937	2,110	2,321	2,229	2,277	2,296	2,497	2,452
Other community, social and personal service activities and private households with employed persons	10,857	2,499	2,822	2,822	2,714	2,809	3,008	3,009
Gross Domestic Product at basic prices	252,591	59,426	61,328	62,728	69,110	61,804	63,945	66,245
Taxes on products (net of subsidies)	30,739	7,281	7,372	7,451	8,635	8,156	8,320	7,991
Gross Domestic Product at market prices	283,330	66,707	68,700	70,178	77,745	69,960	72,265	74,236
Export Oriented Enterprises	18,133	4,119	4,924	4,352	4,737	4,206	4,234	4,457

1/ revised estimates 2/ first estimates

**Table 2 - Gross Domestic Product-sectoral growth rates (% over corresponding period of previous year),
Q₁ 2007 - Q₃ 2010**

	2007	2008	2007 ¹				2008 ¹			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agriculture, hunting, forestry and fishing	-5.4	+3.0	-7.9	-9.5	-4.7	-1.6	+7.1	+4.5	+1.9	+0.6
Sugarcane	-14.2	+4.8	-12.6	-13.4	-14.4	-15.1	+5.1	+4.5	+4.7	+5.3
Other	+3.4	+1.5	-3.6	-5.5	+4.0	+16.1	+8.1	+4.4	0.0	-3.5
Mining and quarrying	-15.1	+22.2	-24.0	-15.5	-12.5	-8.0	+39.7	+56.2	+13.6	-12.4
Manufacturing	+2.3	+3.1	+0.6	+3.5	+4.7	+0.8	+8.8	+4.7	+0.7	-0.2
Sugar	-13.6	+3.7	-13.6	-13.6	-13.6	-13.6	+3.7	+3.7	+3.7	+3.7
Food (exc sugar)	+2.8	+7.6	-6.2	+6.2	+2.8	+6.6	+10.6	+5.5	+4.2	+10.0
Textile	+9.9	+0.1	+8.7	+14.0	+14.0	+3.2	+5.9	-0.1	-4.7	+0.4
Other	-4.4	+2.3	-1.5	-10.0	-1.6	-4.6	+11.3	+11.6	+3.9	-11.5
Electricity , gas and water supply	+2.7	+6.1	+0.9	+2.0	+0.5	+7.9	+6.0	+5.5	+10.4	+3.2
Construction	+16.0	+11.6	+31.6	+18.6	+8.5	+8.1	+15.2	+12.6	+12.1	+6.8
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	+5.2	+4.8	-3.0	+6.8	+8.5	+7.0	+16.6	-5.2	-0.5	+10.5
Wholesale and retail trade	+4.5	+4.4	-3.9	+6.4	+8.2	6.5	+16.9	-6.5	-1.2	+10.9
Other	+12.8	+9.3	+12.5	+11.9	+14.9	+12.3	+11.7	+10.9	+10.2	+6.2
Hotels and restaurants	+12.0	+1.3	+8.4	+8.7	+8.6	+19.7	+11.4	-0.6	+5.1	-8.2
Transport , storage and communications	+7.5	+6.1	+7.4	+8.8	+10.9	+3.8	+12.2	+5.7	+4.6	+2.4
Financial intermediation	+7.6	+10.2	+10.1	+5.6	+7.4	+7.6	+10.6	+9.4	+12.5	+8.3
Insurance	+5.1	+5.0	+4.0	+5.5	+5.3	+5.5	+5.3	+5.1	+4.9	+4.7
Banks	+8.8	+12.7	+13.1	+6.1	+8.3	+8.1	+13.1	+11.4	+16.4	+10.3
Other	+8.0	+10.0	+10.2	+3.9	+8.1	+10.1	+10.3	+9.0	+13.3	+7.7
Real estate, renting and business activities	+9.0	+8.7	+8.9	+8.6	+9.8	+8.9	+8.4	+8.6	+8.2	+9.6
Owner occupied dwellings	+1.8	+2.2	+2.1	+2.3	+1.3	+1.5	+1.9	+1.8	+2.9	+2.1
Other	+15.0	+13.5	+14.6	+13.7	+16.9	+14.9	+13.2	+13.6	+12.1	+15.0
Public administration and defence; compulsory social security	+0.4	+1.1	-1.3	+2.2	+1.8	-0.9	+2.2	+2.9	-1.9	+1.1
Education	+2.3	+3.0	+2.4	+1.8	+3.7	+1.4	+2.7	+2.6	+1.9	+4.7
Health and social work	+5.8	+4.6	+6.7	+3.1	+7.6	+5.1	+5.2	+6.3	+0.1	+6.4
Other community, social and personal service activities and private households with employed persons	+8.0	+8.4	+7.6	+6.1	+9.6	+8.5	+8.4	+8.3	+7.0	+9.9
Gross Domestic Product at basic prices	+5.7	+5.5	+5.0	+5.8	+6.7	+5.2	+10.0	+4.6	+4.1	+3.7
Taxes on products (net of subsidies)	+7.1	+5.9	-2.4	-2.2	+19.0	+15.2	+16.0	+16.2	-2.5	-3.2
Gross Domestic Product at market prices	+5.9	+5.5	+4.3	+5.1	+7.7	+6.0	+10.5	+5.6	+3.5	+3.1
Export Oriented Enterprises	+11.2	+1.6	+10.3	+11.5	+13.1	+9.8	+10.9	+1.6	-4.7	+0.5

1/ revised estimates

Table 2 (cont'd) - Gross Domestic Product-sectoral growth rates (% over corresponding period of previous year), Q₁ 2007 - Q₃ 2010

	2009	2009 ¹				2010		
		Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ²
Agriculture, hunting, forestry and fishing	+8.9	+8.1	+13.0	+8.5	+6.9	-6.9	-4.0	+7.8
Sugarcane	+12.5	+12.1	+12.0	+11.4	+13.3	-2.3	-2.5	+0.8
Other	+6.2	+5.7	+13.4	+6.4	+0.8	-9.9	-5.2	+12.1
Mining and quarrying	-12.2	-8.7	-24.1	-6.8	-5.7	-16.8	+10.4	+3.0
Manufacturing	+2.2	0.0	+0.6	+4.2	+3.7	+9.6	+1.5	+0.7
Sugar	+15.0	+15.0	+15.0	+15.0	+15.0	+2.3	+2.3	+2.3
Food (exc sugar)	+4.0	+8.8	+10.3	+14.8	-12.3	+16.3	+1.3	-1.0
Textile	-0.7	-5.8	-3.8	-5.5	+11.8	+0.7	-11.9	+9.2
Other	+2.0	-2.6	-4.9	+2.1	+11.9	+11.0	+15.4	+2.0
Electricity , gas and water supply	+0.1	+0.1	0.0	-0.5	+0.8	+2.3	+4.3	+3.7
Construction	+6.2	-1.4	-3.7	+7.0	+23.8	-6.8	+5.5	+13.0
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	+1.1	-1.6	+11.5	-3.2	-1.6	+5.3	+1.8	+4.7
Wholesale and retail trade	+0.3	-2.0	+11.6	-4.2	-2.6	+4.8	+0.9	+4.2
Other	+8.6	+4.5	+10.2	+10.4	+8.4	+11.9	+10.7	+11.2
Hotels and restaurants	-5.9	-16.1	+3.0	+3.9	-10.1	+5.6	+3.0	+4.4
Transport , storage and communications	+4.7	+2.4	+3.7	+3.6	+9.0	+2.6	+4.8	+5.4
Financial intermediation	+3.8	+5.0	+2.6	-0.3	+8.0	+0.5	+3.9	+6.0
Insurance	+4.0	+5.1	+4.1	+3.9	+3.1	+3.4	+3.7	+4.8
Banks	+3.0	+4.0	+0.3	-4.1	+11.2	-1.3	+4.3	+6.0
Other	+7.0	+8.5	+8.1	+6.3	+5.2	+2.8	+3.2	+8.4
Real estate, renting and business activities	+6.1	+4.6	+6.1	+6.5	+7.1	+6.5	+5.9	+6.5
Owner occupied dwellings	+0.8	+0.9	+1.8	-0.1	+0.3	+1.2	-0.2	+1.2
Other	+9.6	+7.1	+8.9	+10.9	+11.4	+9.8	+9.6	+9.8
Public administration and defence; compulsory social security	+1.0	+1.6	+1.5	0.0	+0.8	+2.6	+2.9	+3.7
Education	+2.2	+1.7	+2.3	+2.3	+2.6	+3.1	+3.9	+3.6
Health and social work	+7.5	+6.5	+6.4	+9.5	+7.5	+5.2	+4.9	+8.3
Other community, social and personal service activities and private households with employed persons	+7.8	+5.4	+7.3	+9.0	+9.3	+6.9	+7.0	+8.1
Gross Domestic Product at basic prices	+3.1	+0.7	+4.0	+3.4	+5.0	+3.7	+3.4	+5.2
Taxes on products (net of subsidies)	+2.6	+0.8	-3.9	+8.2	+5.7	+1.3	+4.2	+2.7
Gross Domestic Product at market prices	+3.0	+0.7	+3.3	+3.8	+5.0	+3.5	+3.5	+5.0
Export Oriented Enterprises	-1.3	-4.7	-1.3	-3.3	+3.9	+8.3	-8.4	+7.9

1/ revised estimates 2/ first estimates

Table 3 - Quarterly expenditure on Gross Domestic Product at current prices, Q₁ 2007 - Q₃ 2010

(R million)

	Year (Cumulated 4 quarters)		2007 ¹				2008 ¹			
	2007	2008	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Final consumption expenditure	201,013	235,549	47,649	48,243	49,442	55,678	54,111	55,881	59,354	66,204
Households	169,522	200,760	40,126	39,968	41,779	47,649	46,257	47,543	50,224	56,736
General Government	31,492	34,789	7,523	8,275	7,663	8,030	7,854	8,338	9,129	9,468
Gross domestic fixed capital formation	61,240	67,529	12,806	14,339	15,240	18,855	15,344	17,116	16,948	18,121
A. Building & construction work	35,987	45,278	8,340	9,394	8,856	9,397	11,075	11,715	11,090	11,398
Residential building	11,663	15,281	3,182	2,565	2,821	3,095	3,608	3,950	3,814	3,909
Non residential building	17,794	22,162	3,577	4,542	4,791	4,884	5,444	5,355	5,797	5,565
Other construction work	6,530	7,835	1,581	2,287	1,244	1,419	2,023	2,411	1,478	1,923
B. Machinery & equipment	25,253	22,251	4,467	4,945	6,384	9,457	4,270	5,400	5,858	6,723
Passenger car	3,406	3,635	733	786	848	1,039	870	857	912	996
Other transport equipment	4,948	2,888	530	591	656	3,171	522	650	1,112	605
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	2,433	2,288	530	591	656	656	522	650	512	605
Other machinery and equipment	16,899	15,727	3,204	3,568	4,881	5,248	2,879	3,893	3,833	5,122
Change in inventories	4,454	7,354	-2,820	1,751	4,591	933	2,508	3,045	2,983	-1,182
Exports of goods and services	141,187	145,204	33,334	32,513	33,768	41,572	34,379	34,642	36,299	39,884
Goods (f.o.b)	69,708	67,970	15,478	16,614	17,580	20,036	14,157	15,900	18,055	19,858
Services	71,479	77,234	17,856	15,899	16,188	21,536	20,222	18,742	18,244	20,026
Less Imports of goods and services	163,896	181,319	35,362	38,434	41,724	48,375	42,117	44,572	46,484	48,146
Goods (f.o.b)	113,647	124,567	23,000	26,859	29,454	34,334	28,934	30,264	32,521	32,848
Services	50,249	56,752	12,362	11,575	12,270	14,041	13,183	14,308	13,963	15,298
Gross Domestic Product at market prices	243,998	274,316	55,607	58,412	61,318	68,662	64,225	66,112	69,099	74,880

1/ revised estimates

Table 3 (cont'd) - Quarterly expenditure on Gross Domestic Product at current prices, Q₁ 2007 - Q₃ 2010

(R million)

	2009	2009 ¹				2010		
		Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ²
Final consumption expenditure	248,587	57,570	60,221	61,790	69,007	60,512	63,263	65,002
Households	208,858	48,248	49,650	52,456	58,505	50,926	52,354	55,302
General Government	39,729	9,322	10,571	9,334	10,502	9,586	10,909	9,700
Gross domestic fixed capital formation	74,430	16,333	17,867	17,071	23,159	15,495	19,114	18,870
A. Building & construction work	48,809	11,504	11,559	11,782	13,964	10,498	12,536	13,698
Residential building	16,531	3,826	3,566	4,458	4,681	4,446	4,192	4,894
Non residential building	22,016	5,540	5,055	5,324	6,097	4,247	5,227	5,564
Other construction work	10,262	2,138	2,938	2,000	3,186	1,805	3,117	3,239
B. Machinery & equipment	25,621	4,829	6,308	5,289	9,195	4,998	6,578	5,173
Passenger car	2,864	659	666	806	733	790	838	849
Other transport equipment	5,628	512	621	518	3,977	439	550	633
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	2,228	512	621	518	577	439	550	633
Other machinery and equipment	17,129	3,658	5,021	3,965	4,485	3,769	5,190	3,691
Change in inventories	-13,480	-4,079	-1,986	-2,792	-4,622	-879	-688	524
Exports of goods and services	138,271	33,393	32,080	34,510	38,288	36,635	37,279	37,092
Goods (f.o.b)	61,784	14,262	14,714	16,211	16,597	14,157	17,304	17,650
Services	76,487	19,131	17,366	18,299	21,691	22,478	19,975	19,442
Less Imports of goods and services	164,478	36,509	39,482	40,400	48,087	41,804	46,703	47,253
Goods (f.o.b)	111,007	23,733	26,500	27,243	33,531	26,953	32,074	31,461
Services	53,471	12,776	12,982	13,157	14,556	14,851	14,629	15,792
Gross Domestic Product at market prices	283,330	66,707	68,700	70,178	77,745	69,960	72,265	74,236

1/ revised estimates 2/ first estimates

Table 4 - Expenditure on GDP - Growth rates (% over corresponding period of previous year), Q₁ 2007 - Q₃ 2010

	Annual growth rate		2007 ¹				2008 ¹			
	2007	2008	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Final consumption expenditure	+3.7	+5.2	+3.8	+2.4	+5.5	+3.4	+3.7	+5.5	+4.8	+6.9
Households	+4.5	+6.7	+4.8	+3.0	+6.0	+4.2	+3.9	+7.2	+6.6	+9.0
General Government	+0.6	-1.4	-0.8	+0.1	+3.5	-0.3	+2.7	-1.4	-3.2	-3.5
Gross domestic fixed capital formation	+5.9	+1.3	+20.9	+7.8	+8.5	-5.3	+9.5	+11.3	+3.6	-13.9
A. Building & construction work	+17.0	+13.3	+33.2	+19.6	+10.0	+8.6	+17.8	+13.8	+13.0	+9.1
Residential building	+6.8	+18.0	+31.2	-2.8	-3.1	+4.0	+0.7	+40.8	+22.3	+13.8
Non residential building	+49.2	+12.2	+68.4	+71.0	+40.5	+29.5	+34.7	+7.4	+9.0	+2.3
Other construction work	-17.4	+8.1	-8.0	-10.8	-28.4	-25.6	+13.7	-3.7	+7.4	+22.1
B. Machinery & equipment	-6.7	-15.8	+2.8	-9.2	+6.6	-16.0	-6.6	+6.4	-9.4	-35.8
Passenger car	+32.7	+5.6	+8.4	+22.9	+32.8	+66.8	+24.3	+10.6	+17.9	-19.6
Other transport equipment	-38.0	-41.1	-15.8	-5.3	+21.5	-48.5	+8.8	+20.3	+76.1	-83.9
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	+19.3	-5.1	-2.4	+8.9	+41.4	+31.9	+7.9	+19.3	-20.2	-21.1
Other machinery and equipment	+3.3	-12.7	+3.4	-17.7	-2.2	+34.9	-16.4	+2.6	-26.8	-7.6
Exports of goods and services	+1.8	+4.0	-6.0	+4.8	+1.5	+6.9	+7.3	+9.6	+9.7	-3.8
Goods (f.o.b)	-10.8	-0.6	-13.1	-10.3	-11.7	-7.8	-2.5	+1.2	+7.7	+0.7
Services	+18.9	+8.5	+1.4	+28.3	+22.4	+27.1	+16.1	+18.8	+12.0	-8.3
Less Imports of goods and services	+2.5	+1.8	-4.1	+1.6	+11.4	+1.2	+22.0	+7.1	-7.8	-9.1
Goods (f.o.b)	-0.7	-0.4	-9.9	-2.3	+11.9	-2.5	+27.0	+2.0	-9.7	-12.9
Services	+10.7	+6.6	+9.0	+12.3	+10.2	+11.3	+12.5	+19.2	-3.2	-0.1

1/ revised estimates

**Table 4 (cont'd) - Expenditure on GDP - Growth rates (% over corresponding period of previous year),
Q₁ 2007 - Q₃ 2010**

	2009	2009 ¹				2010		
		Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ²
Final consumption expenditure	+2.4	-0.6	+2.3	+3.9	+4.6	+2.6	+2.6	+3.1
Households	+2.1	-0.6	+1.5	+4.1	+3.3	+2.7	+2.6	+3.1
General Government	+5.1	-0.9	+6.0	+3.3	+11.9	+2.1	+2.5	+2.8
Gross domestic fixed capital formation	+8.9	+1.7	+1.4	+1.6	+30.1	-3.6	+6.7	+8.0
A. Building & construction work	+7.7	-0.2	-3.5	+9.1	+26.8	-7.0	+8.8	+15.7
Residential building	+8.1	+1.9	-11.7	+19.9	+23.8	+18.4	+17.9	+9.2
Non residential building	-0.8	-2.2	-7.7	-5.8	+13.3	-21.9	+3.7	+4.0
Other construction work	+30.8	+1.8	+19.5	+39.4	+72.0	-13.8	+6.6	+61.4
B. Machinery & equipment	+11.4	+5.5	+11.7	-11.6	+36.6	+5.0	+2.6	-8.4
Passenger car	-25.8	-39.6	-30.8	-18.4	-14.9	+31.2	+21.4	0.0
Other transport equipment	+70.3	-26.2	-27.1	-62.2	+600.5	-3.2	-8.5	+25.0
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	-14.9	-21.3	-23.3	-12.0	-0.1	-10.6	-14.1	+16.4
Other machinery and equipment	+9.2	+25.2	+28.1	+6.3	-12.6	+4.0	+3.6	-12.6
Exports of goods and services	-3.4	-3.5	-9.6	-4.0	+2.4	+14.9	+23.5	+14.2
Goods (f.o.b)	-9.1	-0.1	-10.5	-11.0	-11.7	+4.6	+26.1	+17.7
Services	+1.6	-6.1	-8.7	+3.8	+17.9	+23.2	+21.2	+11.0
Less Imports of goods and services	-9.2	-19.8	-13.0	-6.2	+2.6	+10.7	+9.6	+9.9
Goods (f.o.b)	-9.1	-22.7	-11.6	-7.7	+6.0	+9.4	+10.5	+6.9
Services	-9.3	-13.3	-16.0	-2.8	-4.5	+13.2	+7.6	+16.5

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. Revisions in this issue

Revisions made in this issue include:

- (i) Rebasing on the results of the 2007 Census of Economic Activities (CEA);
- (ii) Use of improved data sources; and
- (iii) Changes in concepts and methodologies

2.1 Rebasing on the 2007 Census of Economic Activities (CEA)

Benchmark data for the compilation of annual national accounts estimates are obtained from Censuses of Economic Activities (CEA) conducted every five years. The CEA collects data on the operating characteristics and structure of all economic activities, except Agriculture.

The latest CEA was carried out from January 2007 to June 2009 with 2007 as reference year. The results have been used to rebase the national accounts estimates.

2.2 New data sources

(i) **Agriculture:** The results of the Agricultural Cost of Production Survey (ACOPS) conducted in 2005 have been used to update the operating ratios such as Intermediate Consumption/Gross Output ratio and Compensation of Employees/Value Added ratio of the different agricultural sub sectors.

(ii) **Construction:** Updated data on construction rates for residential buildings have been used to estimate the output of the sector.

(iii) **Ownership of dwellings:** The output of the sector has been reviewed based on information on rent and cost of minor repairs reported at the 2006/2007 Household Budget Survey.

(iv) **Public administration:** Employers’ and employees’ contributions to pension fund (a component of value added) which were previously estimated as the amount paid out as pensions to retired officers, have been reviewed using pension contributions paid as per the 2008 Pay Research Bureau report.

2.3 Conceptual and methodological changes

(i) Implicit financial charges

Banks do not charge for financial services explicitly. These are charged indirectly as banks offer lower rates of interest to their depositors and levy higher rates to their borrowers. In the System of National Accounts (SNA93), an indirect measure known as **Financial Intermediation Services Indirectly Measured (FISIM)** is used to value the services for which banks do not charge explicitly. FISIM is equal to interests received less interests paid by banks.

FISIM or service charged by banks is an input used by the different users. However, due to lack of information, the total amount of FISIM was previously recorded as the intermediate consumption of a nominal industry. As recommended by the 1993 SNA, it is now allocated to users as follows:

intermediate consumption of businesses, final consumption of households and government, and a component of exports of services.

(ii) Constant prices estimates

Some improvements in constant price estimates using improved methods such as double deflation method (deflating gross output and intermediate consumption separately) or new indicators have also been made. These relate to:

- (a) Agriculture
- (b) Hotels and restaurants
- (c) Wholesale and retail trade
- (d) Taxes on products net of subsidies
- (e) Investment in machinery and equipment
- (f) Exports of services

(iii) Constant price estimates using Annual Overlap Technique

As recommended in the Quarterly National Accounts Manual (Concepts, Data Sources and Compilation) of the International Monetary Fund (IMF), the Annual Overlap Technique has been used to derive constant quarterly estimates, instead of the traditional fixed-base year constant price estimates. This technique entails compiling estimates for each quarter at the weighted annual average prices of the previous year. The volume data of QNA are then chain-linked to obtain the constant price series.

3. 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, tourism receipts from Bank of Mauritius, as well as some indirect indicators such as employment.

4. 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 6.

5. Seasonal adjustment of 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 used by a majority of statistical offices, central banks and policy analysts to describe and understand the most recent economic developments.

5.1 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 2010. In the light of the new seasonal factors, the seasonally adjusted growth rates for the period 2000 to 2010 have been revised.
- (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, particularly 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.

6. 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 survey data are available. 	<ul style="list-style-type: none"> - Double deflation using Quarterly PPI-A for output and relevant CPI components and other sources for inputs. - Preliminary quarterly changes are based on proportions of the deflated annual estimates/forecasts.
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"> - Double deflation using Quarterly PPI-A for output and relevant CPI components and other sources for inputs.
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"> - Double deflation using quarterly changes in the estimated producers' price index based on retail prices for output of relevant CPI components and other sources for inputs.
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"> - Double deflation using quarterly PPI-A/quarterly changes in the estimated producers' price based on retail prices for output and relevant CPI components and other sources for inputs.

Industry group	Data sources	Methods	Indicator - constant price estimates
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.
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 using CPI.
	<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.

Industry group	Data sources	Methods	Indicator - constant price estimates
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 latest value added structure. Revision is made when survey data are available. 	<ul style="list-style-type: none"> - Double deflation using Quarterly PPI-A for output and relevant CPI components and other sources for inputs. - Preliminary quarterly changes are based on proportions of the deflated annual estimates/forecasts.
Export Oriented Enterprises (EOE)	<ul style="list-style-type: none"> - Quarterly exports from Trade statistics. - Quarterly turnover from the Value Added Tax (VAT) from the Mauritius Revenue Authority (MRA) and the 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 – EOE	<ul style="list-style-type: none"> - Quarterly exports from Trade Statistics - Quarterly turnover from the MRA - Production of excisable goods from Customs and Excise Department - Level of stock from quarterly stock surveys 	<ul style="list-style-type: none"> - Quarterly value added estimates 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)
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. 	

Industry group	Data sources	Methods	Indicator - constant price estimates
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 2007 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-EOE sector. - Value added derived using the production structure obtained at the 2007 CEA. 	<ul style="list-style-type: none"> - Change in volume of imports derived by deflating imports by sector by relevant IPI components..
Repair Services		Quarterly estimates based on imports of spare parts.	<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 number of tourist nights weighted by an average expenditure per tourist per night.
- 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 2007 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 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 2007 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 2007 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 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.
Telecommunication services	<ul style="list-style-type: none"> - Quarterly turnover from VAT from the Mauritius Revenue Authority (MRA). 	<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 and number of life policies.
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 Consumer 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. 	<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
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. 	<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 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. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> 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 other sources, and an estimate for projects for which no permit has been issued. The cost per unit of floor area has been revised in 2009 based on the last revision in the Construction Price Index.	- 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.	A vehicle price index based on seven types of vehicles.
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 2007 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>	<p>A weighted deflator based on separate deflators for “locally produced goods” and “imported goods”. For the “locally produced goods” PPI components are used whilst for “imported good” IPI for “Machinery and equipment” excluding transport equipment are used to construct the deflators.</p>

Exports and Imports of Goods and Services	Data available from the Quarterly Balance of Payments (BOP) of the Bank of Mauritius (BOM) adjusted for import and export of FISIM.	- Deflation using quarterly import and export price indices.
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Allocation of FISIM by sector	The quarterly figure of FISIM calculated from data available on deposits, loans and prevailing rates is distributed by sector following recommendation in the System of National Accounts (SNA) 93.	Deflated by overall FISIM deflator.
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