

Quarterly National Accounts

Fourth Quarter 2011

Introduction

This issue of Economic and Social Indicators on Quarterly National Accounts (QNA) presents quarterly estimates of GDP for first quarter 2008 to the fourth quarter of 2011. 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 2006 to the fourth quarter of 2011, together with some analysis are presented in section 5 of this publication.

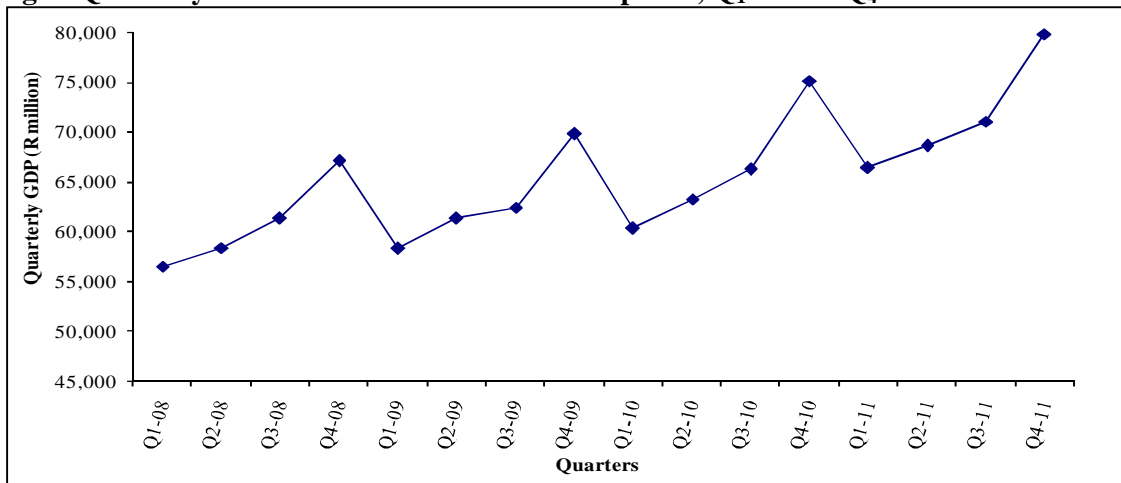
Definitions of terminology are given on pages 8 and 9. The data sources and methods used including the method used for seasonal adjustment are described in the Annex.

2. Quarterly GDP estimates at current prices

2.1 Overall GDP

Figure 1 shows the quarterly GDP estimates at basic prices for first quarter 2008 to the fourth quarter of 2011. 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 2010, GDP at current basic prices which stood at R 60,299 million in the first quarter, increased to R 63,245 million in the second and to R 66,186 million in the third to peak at R 75,096 million in the fourth quarter. It then declined to R 66,335 million in the first quarter of 2011.

Fig 1: Quarterly GDP estimates at current basic prices, Q₁ 2008 – Q₄ 2011



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 2008 to 2011 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 2011 is estimated at R 79,777 million compared to R 71,015 million in the previous quarter and to R 75,096 million in the corresponding quarter of 2010.

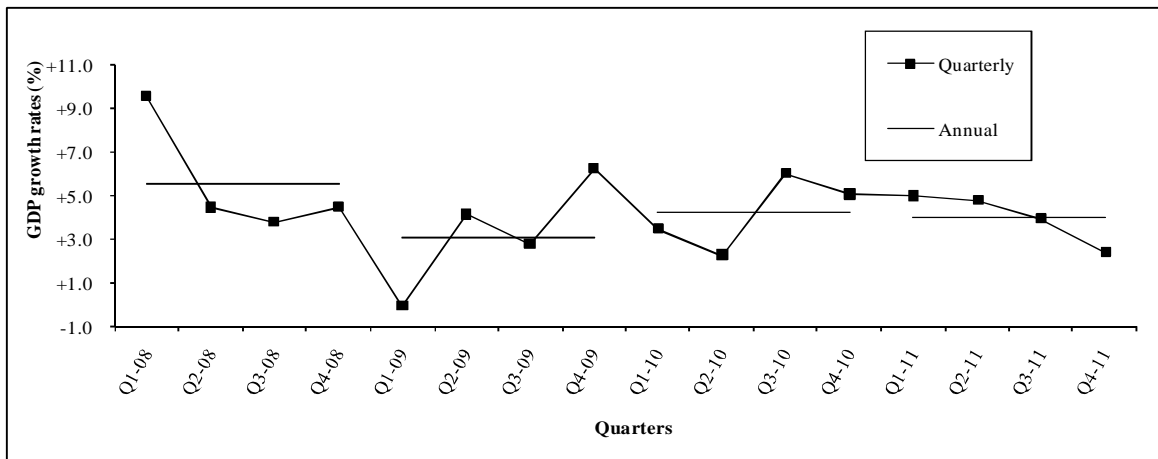
3. Quarterly GDP growth rates (based on data unadjusted for seasonality) – Table 2

3.1 Growth rates, Q₁2008 – Q₄2011, (year on year change)

Table 2 shows year on year quarterly growth rates by industry group for the period first quarter of 2008 to the fourth quarter of 2011. The rates are based on value added unadjusted for seasonality and represent the percentage change in real value added over the same quarter of the previous year.

Figure 2 shows the year on year quarterly GDP growth rates for first quarter 2008 to fourth quarter 2011 and the annual rates for 2008 to 2011. After an annual growth rate of 5.5% in 2008 the economy slowed down in 2009 to register a growth of 3.1% only. It then recovered with growths of 4.2% and 4.0% in 2010 and 2011 respectively.

Fig. 2: GDP growth rates, quarterly (percentage change over corresponding period of previous year) and annual, Q₁ 2008 – Q₄ 2011



Quarterly data indicate that, after a high growth of 9.5% in the first quarter of 2008, GDP slowed down in the following quarters until the first quarter of 2009 when a zero growth was registered. Thereafter, the economy picked up to reach 6.2% in the last quarter of 2009 but slowed down again to 2.3% in the second quarter of 2010. Improvement was noted in the third quarter of

2010 when a growth of 6.0% was registered. Thereafter, a slowdown is observed with the quarterly growth rate reaching 2.4% in the fourth quarter of 2011.

3.2 Growth rates, third quarter 2011 over third quarter 2010

Based on latest available information, GDP growth for the third quarter of 2011 over the corresponding quarter of 2010 has been revised upward to 3.9% from 3.7% as estimated in December 2011. This upward revision is mostly explained by higher growths in “Agriculture, hunting, forestry and fishing” (6.9% instead of 3.0%) and “Construction” (4.2% instead of 1.7%), partly offset by a lower growth in “Transport, storage and communications” (4.5% instead of 4.9%) and “Public administration and defence; compulsory social security” (2.1% “instead of 3.7%).

3.3 Growth rates, fourth quarter 2011 over fourth quarter 2010

GDP growth rate for the fourth quarter of 2011 over the corresponding quarter of 2010 is calculated at 2.4%. Growths were registered in all sectors except for “Manufacturing”. Growths by industry group were as follows:

“Agriculture, hunting, forestry and fishing” grew by 1.0% in the fourth quarter of 2011 compared to 6.9% the previous quarter. The growth of 1.0% was the combined result of increases of 1.8% and 0.3% in “Sugarcane” and “Other agriculture” respectively.

“Manufacturing” declined by 3.5% in the fourth quarter of 2011 as opposed to a growth of 1.4% in the third quarter of 2011. The decline of 3.5% growth was the net result of decreases of 4.0% and 7.2% in “Textile” and “Other manufacturing” respectively partly offset by growths of 3.8% in “Sugar” and of 0.7% in “Food (exc. sugar)”.

“Electricity, gas and water supply” grew by 4.5% in the fourth quarter of 2011 compared to 5.4% in the third quarter.

“Construction” grew by 2.2% in the fourth quarter of 2011, lower than the growth of 4.2% in the previous quarter.

“Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods” grew by 4.1% in the fourth quarter of 2011 after the growth of 3.5% in the third quarter of 2011.

“Hotels and restaurants” registered a lower growth of 1.0% in the fourth quarter of 2011, nearly the same growth of 1.1% recorded for the third quarter. This is explained by lesser tourist arrivals registered for the fourth quarter of 2011.

“Transport, storage and communications” grew by 2.5% in the fourth quarter, lower than the growth of 4.5% for the third quarter of 2011.

“Financial intermediation” grew by 5.3% in the fourth quarter following a growth of 4.3% registered in the third quarter.

“Real estate, renting and business activities” grew by 5.9% in the fourth quarter compared to 6.4% in the third quarter.

“Public administration and defence; compulsory social security” grew by 4.5% in the fourth quarter following a growth of 2.1% in the second quarter.

“Education” grew by 3.5% in the fourth quarter after 3.1% growth in the third quarter.

“Health and social work” grew by 6.2% in the fourth quarter, nearly the same growth of 6.3% noted for the previous quarter.

“Other community, social and personal service activities and private households with employed persons” grew by 6.9% in the fourth quarter of 2011 compared to 7.1% in the third quarter.

3.4 Contribution of industry groups to GDP growth, fourth quarter 2011

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 2.4% growth in GDP during the fourth quarter of 2011 were “Real estate, renting and business activities” (0.7 percentage point), “Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods” (0.5 percentage point) and “Financial intermediation” (0.5 percentage point)

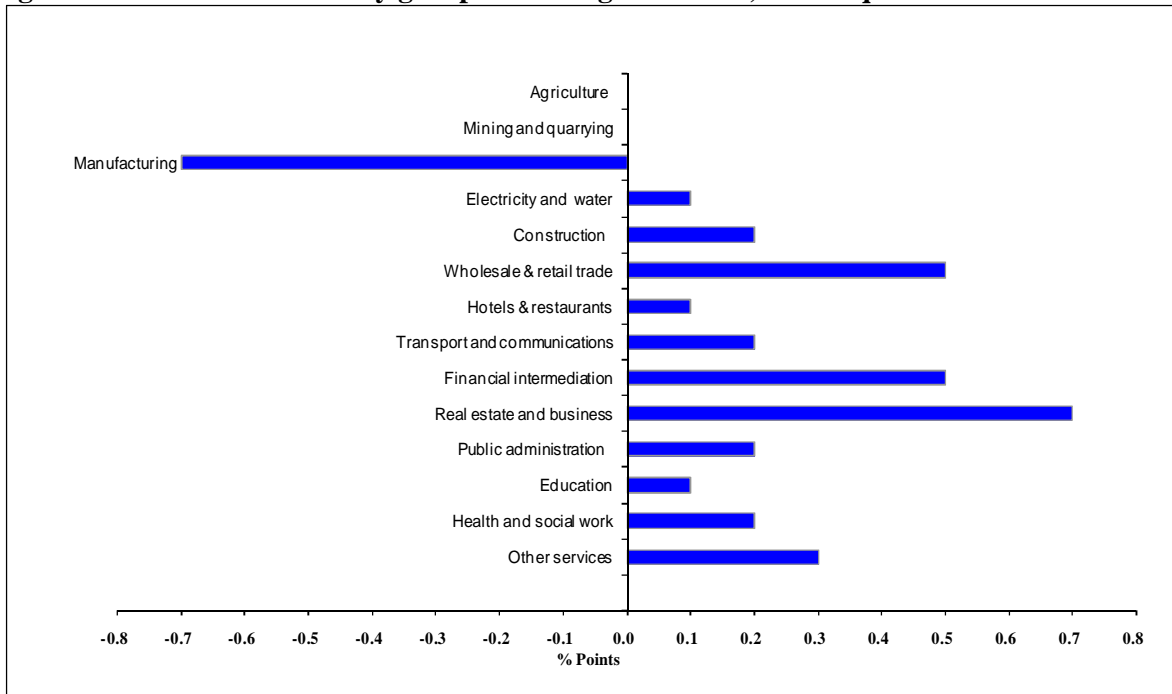
Contributions of the other industry groups ranged from 0.1 to 0.3 percentage point except for “Manufacturing” whose contribution was negative (-0.7 percentage point) and “Agriculture, hunting, forestry and fishing” and “Mining and quarrying”, with negligible contribution.

Table A: Contribution of industry groups to GDP growth (percentage point), Q₁ 2010 – Q₄ 2011

Industry	Contribution to GDP growth							
	Q ₁ 2010	Q ₂ 2010	Q ₃ 2010	Q ₄ 2010	Q ₁ 2011	Q ₂ 2011	Q ₃ 2011	Q ₄ 2011
Agriculture, hunting, forestry and fishing	-0.2	-0.2	0.2	0.0	-0.1	0.3	0.3	0.0
Mining and quarrying	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.8	-0.5	0.4	0.9	1.2	1.3	0.3	-0.7
Electricity, gas and water supply	0.1	-0.1	0.2	0.2	0.1	0.0	0.1	0.1
Construction	-0.4	0.4	0.7	0.4	-0.3	-0.8	0.3	0.2
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	0.5	0.2	0.5	0.6	0.3	0.3	0.4	0.5
Hotels and restaurants	0.6	0.2	0.3	0.5	0.4	0.4	0.1	0.1
Transport, storage and communications	0.5	0.6	0.6	0.4	0.8	0.5	0.4	0.2
Financial intermediation	0.1	0.4	0.6	0.6	0.6	0.7	0.5	0.5
Real estate, renting and business activities	0.7	0.8	0.9	0.6	0.9	0.9	0.8	0.7
Public administration and defence; compulsory social security	0.1	-0.2	0.7	0.2	0.3	0.3	0.1	0.2
Education	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1
Health and social work	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2
Other community, social and personal service activities and private households with employed persons	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
GDP at basic prices published	3.5	2.3	6.0	5.1	5.0	4.8	3.9	2.4

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 2011



4. Quarterly GDP by expenditure

4.1 Quarterly expenditure components at current prices

During the fourth quarter of 2011, final consumption expenditure which comprises consumption expenditure of private households and general government, amounted to R 78,006 million, representing 86.5% of the quarterly GDP at market prices. Final consumption of households estimated at R 66,639 million represented 73.9% of the quarterly GDP, and that of general government estimated at R 11,367 million, the remaining 12.6% (Table 3).

Analysis of quarterly data from 2008 to 2011 shows seasonality in household consumption expenditure with highest consumption occurring during the fourth quarters. In 2010, 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 2011

Analysis of year on year quarterly GDP by expenditure shows that total final consumption expenditure in real terms increased by 2.1% in the fourth quarter of 2011, lower than the 2.4% growth registered for the third quarter of 2011 (Table 4). The final consumption expenditure of households grew by 2.7% in the fourth quarter of 2011 compared to 2.5% in the previous quarter while that of general government declined by 0.9% as opposed to a growth of 2.1% noted for the third quarter of 2011.

Investment registered a growth of 12.9% during the fourth quarter of 2011 after the growth of 2.6% recorded in previous quarter. The growth of 12.9% is explained by the combined effect of growths of 31.2% and 6.3% in “Machinery and equipment” and “Building and construction work” respectively.

The growth of 31.2% in “Machinery and equipment” in the fourth quarter of 2011 is due to a high growth of 47.7% in “Other machinery and equipment” explained by the acquisition of power generating plant, and a growth of 2.5% in “Other transport equipment” partly offset by a decline of 5.6% in “Passenger car”.

The growth of 6.3% in “Building and construction work” in the fourth quarter of 2011 is attributable to growths of 30.1% and 6.8% in “Residential building” and “Other construction work” respectively, partly offset by a decline of 14.8% in “Non-residential building”.

After a series of positive growths since fourth quarter of 2009, exports of goods and services contracted by 3.0% while imports of goods and services grew by 2.4% during the fourth quarter of 2011. The decline of 3.0% in exports of goods and services is attributable to a decrease of 8.1% in exports of goods partly offset by a growth of 1.5% in exports of services. The growth of 2.4% in imports of goods and services was due to growths of 3.3% and 0.3% in imports of goods and imports of services respectively.

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 first quarter 2005 to fourth quarter 2011.

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 showed a downturn of the economy as from the fourth quarter of 2010 followed by lesser growths during the year 2011 while the quarter-to-quarter data revealed a slowing down of the economy as early as from the first quarter of 2010.

Quarter to quarter GDP growth rates based on seasonally adjusted data show that the economy grew by only 0.1% in the fourth quarter of 2011 compared to 1.1% in the third quarter of 2011 and to 1.4% in the corresponding fourth quarter of 2010.

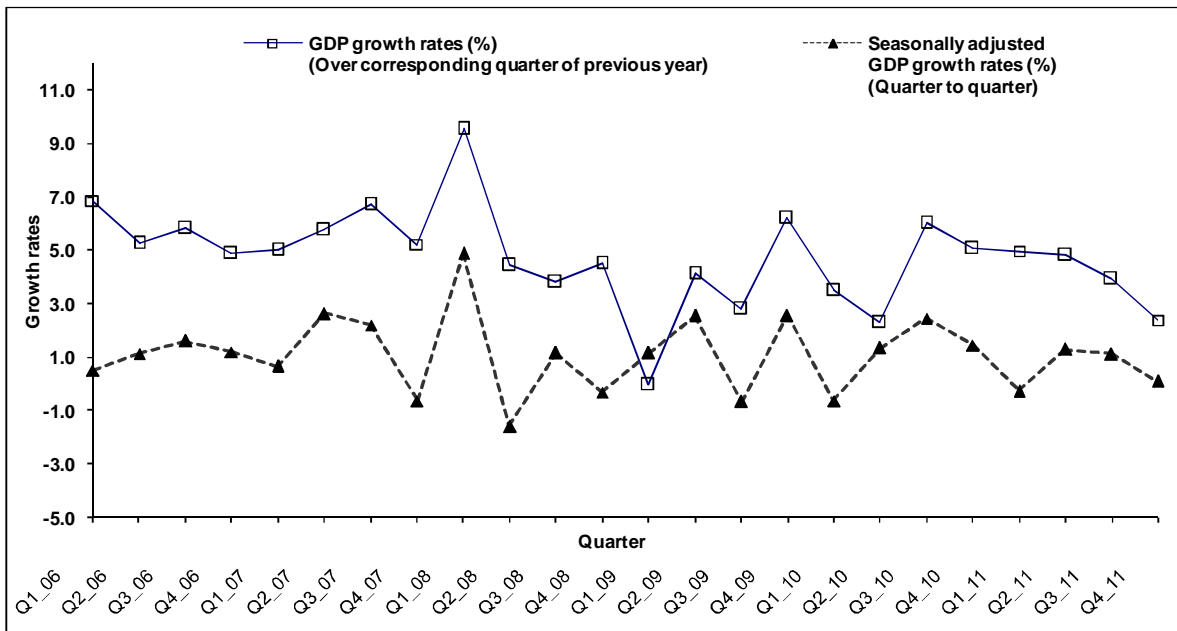
Users may consult the website of Statistics Mauritius (<http://statsmauritius.gov.mu>) for seasonally adjusted growth rates by industry group.

Table B: Quarterly GDP growth rates, Q₁ 2006 – Q₄ 2011

Quarter	GDP growth rates (%) (Over corresponding quarter of previous year)	Seasonally adjusted GDP growth rates ¹ (%) (Quarter to quarter)	Quarter	GDP growth rates (%) (Over corresponding quarter of previous year)	Seasonally adjusted GDP growth rates ¹ (%) (Quarter to quarter)
Q1_06	6.9	0.5	Q1_10	3.5	-0.6
Q2_06	5.2	1.1	Q2_10	2.3	1.4
Q3_06	5.8	1.6	Q3_10	6.0	2.5
Q4_06	4.9	1.2	Q4_10	5.1	1.4
Q1_07	5.0	0.7	Q1_11	5.0	-0.3
Q2_07	5.8	2.6	Q2_11	4.8	1.3
Q3_07	6.7	2.2	Q3_11	3.9	1.1
Q4_07	5.2	-0.6	Q4_11	2.4	0.1
Q1_08	9.5	4.9			
Q2_08	4.4	-1.6			
Q3_08	3.8	1.2			
Q4_08	4.5	-0.3			
Q1_09	0.0	1.2			
Q2_09	4.1	2.6			
Q3_09	2.8	-0.7			
Q4_09	6.2	2.6			

1/ Revised

Figure 4: GDP growth rates (over corresponding quarter of previous year and quarter to quarter), Q₁ 2006 – Q₄ 2011.



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. Export Oriented Enterprises (EOE)

Export Oriented Enterprises comprise enterprises formerly operating with an export certificate and these export manufacturing enterprises holding a registration certificate issued by the Board of Investment.

8. 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.

9. 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 recommended by the 1993 SNA, it is allocated to users as follows: intermediate consumption of businesses, final consumption of households and government, and a component of exports of services.

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

**Statistics Mauritius
Ministry of Finance and Economic Development
Port Louis
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**Contact Person:
Mr. Y. Thorabally,
Statistician,
email: cso_qna@mail.gov.mu
Statistics Mauritius
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 2008 - Q₄ 2011

(R million)

	Year (Cumulated 4 quarters)		2008				2009 ¹			
	2008	2009	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Agriculture, hunting, forestry and fishing	9,941	9,800	2,058	2,073	2,571	3,240	2,023	2,106	2,559
Sugarcane	4,230	3,489	761	824	1,021	1,624	611	656	841	1,381
Other	5,712	6,311	1,297	1,249	1,550	1,616	1,412	1,451	1,718	1,731
Mining and quarrying	108	101	29	31	25	23	28	25	25	23
Manufacturing	47,127	47,326	9,694	11,543	11,757	14,133	9,280	11,596	11,696	14,754
Sugar	1,141	988	200	315	314	311	174	273	272	269
Food (exc sugar)	15,943	16,021	2,941	3,884	4,141	4,977	2,800	4,254	3,971	4,995
Textile	13,882	14,213	3,275	3,775	3,141	3,690	3,339	3,642	3,259	3,973
Other	16,162	16,103	3,278	3,568	4,161	5,155	2,966	3,427	4,194	5,516
Electricity , gas and water supply	4,590	5,398	1,044	1,160	1,204	1,183	1,382	1,241	1,377	1,397
Construction	16,472	17,471	4,032	4,263	4,056	4,121	4,116	4,161	4,241	4,954
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	29,029	28,770	6,390	6,593	7,467	8,579	6,260	7,380	7,195	7,935
Wholesale and retail trade	26,379	25,820	5,923	5,893	6,867	7,696	5,750	6,600	6,535	6,935
Other	2,650	2,950	467	700	600	883	510	780	660	1,000
Hotels and restaurants	19,171	16,749	5,684	4,703	3,898	4,886	4,887	3,684	3,378	4,800
Transport , storage and communications	23,923	24,191	6,157	5,344	6,067	6,355	5,840	5,421	6,134	6,796
Financial intermediation	23,909	25,834	5,558	5,600	6,424	6,326	6,270	6,124	6,782	6,658
Insurance	6,466	7,060	1,437	1,540	1,796	1,693	1,576	1,637	1,842	2,005
Banks	14,241	15,274	3,406	3,262	3,803	3,769	3,926	3,692	4,030	3,626
Other	3,202	3,500	715	798	825	864	768	795	910	1,027
Real estate, renting and business activities	27,258	29,777	6,572	6,791	6,866	7,030	7,261	7,472	7,427	7,616
Owner occupied dwellings	10,832	11,168	2,635	2,688	2,759	2,750	2,744	2,773	2,824	2,828
Other	16,426	18,608	3,937	4,103	4,107	4,280	4,518	4,700	4,603	4,788
Public administration and defence; compulsory social security	13,780	15,322	2,981	3,290	3,659	3,851	3,686	4,082	3,666	3,889
Education	10,273	11,084	2,295	2,481	2,765	2,731	2,627	2,829	2,833	2,795
Health and social work	7,730	8,937	1,728	1,894	2,015	2,093	2,110	2,321	2,229	2,277
Other community, social and personal service activities and private households with employed persons	9,804	10,857	2,255	2,543	2,552	2,453	2,499	2,822	2,822	2,714
Gross Domestic Product at basic prices	243,115	251,616	56,476	58,308	61,326	67,005	58,269	61,265	62,364	69,719
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	274,316	282,355	64,023	66,189	69,024	75,079	65,550	68,637	69,814	78,354
Export Oriented Enterprises	17,839	17,413	4,232	4,860	4,177	4,569	3,682	4,580	4,128	5,023

1/ revised estimates

Figures are based on results of Census of Economic Activities (CEA) 2007

Table 1 - (cont'd) Quarterly Gross Domestic Product by industry group at current basic prices, Q₁ 2008 - Q₄ 2011

(R million)

			2010 ¹				2011			
	2010	2011	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Agriculture, hunting, forestry and fishing	9,678	10,395	2,041	2,041	2,559	3,036	2,143	2,197	2,721	3,334
Sugarcane	3,051	3,545	525	571	740	1,214	614	676	862	1,393
Other	6,627	6,850	1,516	1,470	1,819	1,822	1,530	1,521	1,859	1,941
Mining and quarrying	106	109	24	29	26	27	22	24	28	34
Manufacturing	47,767	50,519	9,556	11,122	11,834	15,255	10,616	12,354	12,354	15,196
Sugar	887	1,024	156	245	244	242	180	283	282	279
Food (exc sugar)	16,557	17,729	3,057	4,332	4,015	5,153	3,393	4,691	4,072	5,572
Textile	13,640	14,786	2,955	3,068	3,456	4,161	3,271	3,774	3,728	4,013
Other	16,683	16,981	3,388	3,477	4,119	5,699	3,771	3,606	4,272	5,332
Electricity , gas and water supply	5,401	5,358	1,432	1,399	1,322	1,247	1,394	1,317	1,283	1,364
Construction	18,231	18,597	3,829	4,408	4,746	5,247	3,803	4,085	5,129	5,580
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	31,178	33,800	6,430	7,421	7,684	9,643	7,029	7,869	8,399	10,503
Wholesale and retail trade	27,898	30,025	5,854	6,548	6,945	8,551	6,364	6,874	7,543	9,245
Other	3,280	3,775	576	873	739	1,093	665	996	856	1,258
Hotels and restaurants	18,514	20,268	5,303	4,052	3,793	5,366	5,763	4,348	4,046	6,110
Transport , storage and communications	25,256	26,650	6,315	5,773	6,338	6,830	6,863	6,329	6,694	6,764
Financial intermediation	26,465	28,806	5,644	6,387	7,057	7,377	6,842	6,986	7,460	7,518
Insurance	7,769	8,549	1,600	1,800	2,100	2,269	1,795	1,930	2,400	2,424
Banks	15,000	16,300	3,244	3,787	3,957	4,012	4,147	4,181	4,014	3,958
Other	3,696	3,957	800	800	1,000	1,096	900	875	1,046	1,136
Real estate, renting and business activities	32,643	36,995	7,896	8,125	8,174	8,448	8,956	9,237	9,260	9,541
Owner occupied dwellings	11,725	12,720	2,875	2,897	2,948	3,004	3,129	3,171	3,195	3,225
Other	20,918	24,275	5,021	5,227	5,226	5,443	5,827	6,066	6,065	6,316
Public administration and defence; compulsory social security	16,159	16,981	3,834	4,061	4,165	4,099	4,037	4,350	4,236	4,358
Education	11,686	12,596	2,847	2,982	3,009	2,848	3,042	3,267	3,211	3,077
Health and social work	9,694	10,808	2,338	2,437	2,469	2,450	2,593	2,774	2,731	2,710
Other community, social and personal service activities and private households with employed persons	12,049	13,846	2,809	3,008	3,009	3,223	3,232	3,462	3,464	3,689
Gross Domestic Product at basic prices	264,826	285,726	60,299	63,245	66,186	75,096	66,335	68,598	71,015	79,777
Taxes on products (net of subsidies)	33,957	37,731	8,156	8,320	7,991	9,490	9,139	9,380	8,827	10,385
Gross Domestic Product at market prices	298,783	323,457	68,455	71,566	74,177	84,586	75,474	77,979	79,843	90,162
Export Oriented Enterprises	17,334	18,333	3,535	4,165	4,334	5,300	4,015	4,767	4,578	4,973

1/ revised estimates 2/ first estimates

**Table 2 - Gross Domestic Product-sectoral growth rates (% over corresponding period of previous year),
Q₁ 2008 - Q₄ 2011**

	Annual growth rate		2008				2009 ¹			
	2008	2009	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agriculture, hunting, forestry and fishing	+3.0	+8.9	+7.1	+4.5	+1.9	+0.6	+7.7	+13.1	+8.8	+6.8
Sugarcane	+4.8	+12.5	+5.1	+4.5	+4.7	+5.3	+12.1	+12.0	+11.4	+13.3
Other	+1.5	+6.2	+8.1	+4.4	-0.1	-3.5	+5.7	+13.4	+6.5	+0.8
Mining and quarrying	+22.2	-12.2	+39.7	+56.2	+13.6	-12.4	-8.7	-24.1	-6.8	-5.7
Manufacturing	+3.2	+2.1	+5.9	+3.8	-0.9	+4.2	-3.1	+1.7	+2.4	+7.5
Sugar	+3.7	+15.0	+3.7	+3.7	+3.7	+3.7	+15.0	+15.0	+15.0	+15.0
Food (exc sugar)	+7.7	+3.8	+8.4	+2.6	+14.3	+6.3	-1.6	+13.1	-0.9	+3.7
Textile	+0.1	-0.2	+7.6	+2.4	-12.2	+4.2	-0.6	-5.9	+1.2	+5.0
Other	+2.3	+1.5	+2.2	+6.9	-1.2	+2.3	-7.7	-2.0	+2.8	+9.1
Electricity , gas and water supply	+6.1	+0.1	+6.0	+5.5	+10.4	+3.2	+0.1	0.0	-0.5	+0.8
Construction	+11.6	+6.1	+15.2	+12.6	+12.1	+6.8	-1.4	-3.9	+7.0	+23.6
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	+4.8	+1.0	+16.6	-5.2	-0.5	+10.5	-1.6	+11.2	-3.2	-1.6
Wholesale and retail trade	+4.4	+0.2	+16.9	-6.5	-1.2	10.9	-2.0	+11.3	-4.2	-2.6
Other	+9.3	+8.6	+11.7	+10.9	+10.2	+6.2	+4.5	+10.2	+10.4	+8.4
Hotels and restaurants	+1.3	-6.0	+11.4	-0.6	+5.1	-8.2	-16.1	+3.0	+3.9	-10.2
Transport , storage and communications	+6.1	+4.8	+12.2	+5.7	+4.6	+2.4	+0.7	+3.7	+1.8	+12.3
Financial intermediation	+10.1	+4.5	+10.6	+9.4	+12.5	+8.3	+5.7	+3.2	+0.8	+8.5
Insurance	+5.0	+4.0	+5.3	+5.1	+4.9	+4.7	+5.1	+4.1	+3.9	+3.1
Banks	+12.7	+4.2	+13.1	+11.4	+16.4	+10.3	+5.2	+1.3	-2.4	+12.1
Other	+10.0	+7.0	+10.3	+9.0	+13.3	+7.7	+8.5	+8.1	+6.3	+5.2
Real estate, renting and business activities	+8.7	+5.8	+8.5	+8.6	+8.2	+9.7	+4.8	+5.7	+5.4	+7.2
Owner occupied dwellings	+2.2	+0.6	+2.1	+1.8	+2.7	+2.3	+0.4	+1.3	+0.2	+0.3
Other	+13.5	+9.3	+13.2	+13.6	+12.1	+15.0	+7.8	+8.6	+8.8	+11.7
Public administration and defence; compulsory social security	+1.1	+1.0	+2.2	+2.9	-1.9	+1.1	+1.6	+1.5	0.0	+0.8
Education	+3.0	+2.5	+2.7	+2.6	+1.9	+4.7	+2.4	+2.4	+2.4	+2.7
Health and social work	+4.6	+7.5	+5.2	+6.3	+0.1	+6.4	+6.5	+6.4	+9.5	+7.5
Other community, social and personal service activities and private households with employed persons	+8.4	+7.8	+8.4	+8.3	+7.0	+9.9	+5.4	+7.3	+9.0	+9.3
Gross Domestic Product at basic prices	+5.5	+3.1	+9.5	+4.4	+3.8	+4.5	0.0	+4.1	+2.8	+6.2
Taxes on products (net of subsidies)	+5.9	+2.6	+16.0	+16.2	-2.5	-3.2	+0.8	-3.9	+8.2	+5.7
Gross Domestic Product at market prices	+5.5	+3.0	+10.1	+5.4	+3.2	+3.8	+0.1	+3.4	+3.2	+6.2
Export Oriented Enterprises	+1.6	-0.9	+12.5	+4.6	-8.7	+0.3	-11.6	-4.3	+0.4	+11.7

1/ revised estimates

Figures are based on results of Census of Economic Activities (CEA) 2007

Table 2 (cont'd) - Gross Domestic Product-sectoral growth rates (% over corresponding period of previous year), Q₁ 2008 - Q₄ 2011

			2010 ¹				2011			
	2010	2011	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Agriculture, hunting, forestry and fishing	-1.3	+3.4	-7.1	-6.5	+4.9	+1.0	-2.5	+8.1	+6.9	+1.0
Sugarcane	-6.4	+3.5	-9.4	-9.6	-6.3	-3.4	+3.7	+5.9	+4.4	+1.8
Other	+1.5	+3.4	-7.1	-5.2	+11.6	+4.3	-5.9	+9.4	+8.2	+0.3
Mining and quarrying	+0.5	-2.0	-19.0	+6.8	+0.9	+13.2	-14.5	-21.5	+4.3	+24.5
Manufacturing	+2.1	+2.7	+4.8	-2.8	+2.1	+4.1	+7.6	+7.4	+1.4	-3.5
Sugar	-4.0	+3.8	-4.0	-4.0	-4.0	-4.0	+3.8	+3.8	+3.8	+3.8
Food (exc sugar)	+4.4	-0.2	+10.2	+2.8	+2.0	+4.1	+3.4	+0.9	-5.5	+0.7
Textile	0.0	+8.0	-7.8	-12.2	+10.5	+9.1	+10.2	+22.4	+7.4	-4.0
Other	+2.1	+1.1	+12.4	-0.2	-3.4	+1.6	+10.4	+2.9	+2.9	-7.2
Electricity , gas and water supply	+3.8	+4.0	+5.8	-6.0	+8.6	+9.7	+5.0	+1.3	+5.4	+4.5
Construction	+4.2	-2.0	-5.6	+5.6	+11.2	+5.2	-4.5	-11.4	+4.2	+2.2
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	+4.3	+3.5	+5.2	+1.9	+4.7	+5.3	+3.0	+2.8	+3.5	+4.1
Wholesale and retail trade	+3.9	+2.9	+4.9	+1.2	+4.5	+5.0	+2.7	+2.3	+3.1	+3.6
Other	+8.1	+8.1	+8.6	+8.5	+7.7	+7.8	+8.2	+7.1	+8.5	+8.6
Hotels and restaurants	+6.0	+3.1	+7.4	+3.9	+5.1	+7.4	+4.4	+6.5	+1.1	+1.0
Transport , storage and communications	+5.4	+4.9	+5.4	+6.1	+6.3	+4.3	+7.4	+5.9	+4.5	+2.5
Financial intermediation	+4.3	+5.5	+0.5	+3.9	+6.1	+6.4	+6.4	+6.5	+4.3	+5.3
Insurance	+4.5	+4.5	+3.4	+3.7	+4.8	+5.7	+5.0	+4.5	+4.4	+4.2
Banks	+3.9	+6.0	-1.2	+4.3	+6.0	+6.4	+7.0	+6.7	+4.1	+6.0
Other	+5.6	+6.0	+2.8	+3.2	+8.4	+8.0	+6.4	+8.6	+4.8	+4.1
Real estate, renting and business activities	+6.3	+6.3	+5.8	+5.9	+7.5	+5.9	+6.3	+6.6	+6.4	+5.9
Owner occupied dwellings	+1.4	+1.5	+1.1	+0.2	+1.3	+2.9	+1.5	+2.4	+1.9	+0.4
Other	+9.2	+9.0	+8.8	+9.4	+11.4	+7.7	+9.2	+9.0	+8.9	+8.9
Public administration and defence; compulsory social security	+3.3	+3.8	+1.7	-2.6	+11.3	+3.4	+3.9	+4.9	+2.1	+4.5
Education	+4.1	+3.6	+3.8	+4.4	+4.5	+3.6	+2.9	+4.8	+3.1	+3.5
Health and social work	+6.3	+6.5	+4.8	+5.2	+7.6	+7.3	+6.5	+6.6	+6.3	+6.2
Other community, social and personal service activities and private households with employed persons	+7.9	+7.5	+6.9	+7.0	+8.1	+9.8	+8.0	+8.0	+7.1	+6.9
Gross Domestic Product at basic prices	+4.2	+4.0	+3.5	+2.3	+6.0	+5.1	+5.0	+4.8	+3.9	+2.4
Taxes on products (net of subsidies)	+3.4	+5.6	+1.3	+4.4	+1.6	+6.0	+6.9	+6.9	+6.2	+2.5
Gross Domestic Product at market prices	+4.2	+4.1	+3.3	+2.5	+5.6	+5.1	+5.2	+5.0	+4.1	+2.4
Export Oriented Enterprises	+6.5	+8.4	+2.8	-2.6	+12.4	+13.0	+16.1	+17.0	+8.0	-4.1

1/ revised estimates 2/ first estimates

Figures are based on results of Census of Economic Activities (CEA) 2007

Table 3 - Quarterly expenditure on Gross Domestic Product at current prices, Q₁ 2008 - Q₄ 2011

(R million)

	Year (Cumulated 4 quarters)		2008				2009 ¹			
	2008	2009	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Final consumption expenditure	235,549	248,630	54,111	55,881	59,354	66,204	57,582	60,230	61,800	69,018
Households	200,760	208,879	46,257	47,543	50,224	56,736	48,253	49,655	52,461	58,511
General Government	34,789	39,751	7,854	8,338	9,129	9,468	9,329	10,576	9,339	10,507
Gross domestic fixed capital formation	67,530	74,430	15,344	17,116	16,948	18,121	16,333	17,867	17,071	23,159
A. Building & construction work	45,278	48,809	11,075	11,715	11,090	11,398	11,504	11,559	11,782	13,964
Residential building	15,281	16,531	3,608	3,950	3,814	3,909	3,826	3,566	4,458	4,681
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	22,252	25,621	4,270	5,401	5,858	6,723	4,829	6,308	5,289	9,195
Passenger car	3,635	2,864	870	857	912	996	659	666	806	733
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	15,728	17,129	2,879	3,894	3,834	5,122	3,658	5,021	3,965	4,485
Change in inventories	7,352	-14,292	2,306	3,122	2,907	-983	-5,363	-2,180	-3,214	-3,535
Exports of goods and services	145,204	138,243	34,379	34,642	36,299	39,884	33,449	32,150	34,489	38,155
Goods (f.o.b)	67,970	61,681	14,157	15,900	18,055	19,858	14,314	14,699	16,130	16,538
Services*	77,234	76,562	20,222	18,742	18,244	20,026	19,135	17,451	18,359	21,617
Less Imports of goods and services	181,319	164,655	42,117	44,572	46,484	48,146	36,451	39,430	40,332	48,442
Goods (f.o.b)	124,567	111,154	28,934	30,264	32,521	32,848	23,692	26,498	27,220	33,744
Services*	56,752	53,501	13,183	14,308	13,963	15,298	12,759	12,932	13,112	14,698
Gross Domestic Product at market prices	274,316	282,355	64,023	66,189	69,024	75,079	65,550	68,637	69,814	78,354

1/ revised estimates

* "Exports and imports of services" from Bank of Mauritius, adjusted for FISIM.

Table 3 (cont'd) - Quarterly expenditure on Gross Domestic Product at current prices, Q₁ 2008 - Q₄ 2011

(R million)

			2010 ¹				2011			
	2010	2011	Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Final consumption expenditure	261,930	280,595	60,529	62,693	65,703	73,004	64,760	67,203	70,626	78,006
Households	220,305	237,148	50,926	52,354	55,302	61,723	54,544	56,204	59,761	66,639
General Government	41,625	43,447	9,603	10,339	10,401	11,282	10,216	10,999	10,865	11,367
Gross domestic fixed capital formation	74,397	76,691	15,888	19,281	19,296	19,932	16,122	16,961	20,371	23,237
<i>A. Building & construction work</i>	<i>52,167</i>	<i>53,134</i>	<i>10,888</i>	<i>12,716</i>	<i>14,050</i>	<i>14,513</i>	<i>10,897</i>	<i>11,642</i>	<i>14,595</i>	<i>16,000</i>
Residential building	18,769	22,298	4,483	4,192	4,894	5,200	5,089	4,437	5,754	7,018
Non residential building	21,531	18,249	4,462	5,292	5,800	5,977	3,272	4,146	5,546	5,285
Other construction work	11,867	12,588	1,943	3,232	3,356	3,336	2,537	3,059	3,295	3,697
<i>B. Machinery & equipment</i>	<i>22,230</i>	<i>23,557</i>	<i>4,999</i>	<i>6,565</i>	<i>5,247</i>	<i>5,419</i>	<i>5,225</i>	<i>5,319</i>	<i>5,776</i>	<i>7,237</i>
Passenger car	3,459	3,546	790	842	863	964	781	891	854	1,020
Other transport equipment	2,396	2,678	485	550	668	693	602	562	750	764
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	<i>2,396</i>	<i>2,678</i>	<i>485</i>	<i>550</i>	<i>668</i>	<i>693</i>	<i>602</i>	<i>562</i>	<i>750</i>	<i>764</i>
Other machinery and equipment	16,375	17,333	3,724	5,173	3,716	3,762	3,842	3,866	4,172	5,453
Change in inventories	-3,749	5,775	-2,448	-1,189	-421	309	747	3,577	262	1,189
Exports of goods and services	156,939	174,962	36,951	37,251	37,081	45,656	43,738	40,187	44,297	46,740
Goods (f.o.b)	69,550	75,916	14,552	17,249	17,437	20,312	17,776	18,418	20,064	19,658
Services*	87,389	99,046	22,399	20,002	19,644	25,344	25,962	21,769	24,233	27,082
Less Imports of goods and services	190,734	214,566	42,464	46,472	47,483	54,315	49,894	49,949	55,713	59,010
Goods (f.o.b)	127,839	141,404	27,242	31,863	31,508	37,226	32,930	33,142	34,969	40,363
Services*	62,895	73,162	15,222	14,609	15,975	17,089	16,964	16,807	20,744	18,647
Gross Domestic Product at market prices	298,783	323,457	68,455	71,566	74,177	84,586	75,474	77,979	79,843	90,162

1/ revised estimates 2/ first estimates

* "Exports and imports of services" from Bank of Mauritius, adjusted for FISIM.

Table 4 - Expenditure on GDP - Growth rates (% over corresponding period of previous year), Q₁ 2008 - Q₄ 2011

	Annual growth rate		2008				2009 ¹			
	2008	2009	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Final consumption expenditure	+5.2	+2.4	+3.7	+5.5	+4.8	+6.9	-0.7	+2.3	+3.9	+4.6
Households	+6.7	+2.1	+3.9	+7.2	+6.6	+9.0	-0.6	+1.5	+4.1	+3.3
General Government	-1.4	+5.1	+2.6	-1.5	-3.3	-3.6	-1.0	+6.0	+3.2	+11.9
Gross domestic fixed capital formation	+1.3	+8.9	+9.5	+11.3	+3.6	-13.9	+1.7	+1.4	+1.6	+30.1
A. Building & construction work	+13.3	+7.7	+17.8	+13.8	+13.0	+9.1	-0.2	-3.5	+9.1	+26.8
Residential building	+18.0	+8.1	+0.7	+40.8	+22.3	+13.8	+1.9	-11.7	+19.9	+23.8
Non residential building	+12.2	-0.8	+34.7	+7.4	+9.0	+2.3	-2.2	-7.7	-5.8	+13.3
Other construction work	+8.1	+30.8	+13.7	-3.7	+7.4	+22.1	+1.8	+19.5	+39.4	+72.0
B. Machinery & equipment	-15.8	+11.4	-6.6	+6.4	-9.4	-35.8	+5.5	+11.7	-11.6	+36.6
Passenger car	+5.6	-25.8	+24.3	+10.6	+17.9	-19.6	-39.6	-30.8	-18.3	-14.9
Other transport equipment	-41.1	+70.3	+8.8	+20.3	+76.1	-83.9	-26.2	-27.1	-62.2	+600.5
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	-5.1	-14.9	+7.9	+19.3	-20.2	-21.1	-21.3	-23.3	-12.0	-0.1
Other machinery and equipment	-12.7	+9.2	-16.4	+2.6	-26.8	-7.6	+25.2	+28.1	+6.3	-12.6
Exports of goods and services	+4.0	-3.4	+6.2	+8.3	+8.3	-5.0	-4.1	-9.4	-4.0	+2.4
Goods (f.o.b)	-0.6	-9.3	-4.9	-1.3	+5.1	-1.7	-0.6	-10.9	-11.4	-12.1
Services	+8.5	+1.7	+16.1	+18.8	+12.0	-8.3	-6.6	-8.1	+3.9	+18.0
Less Imports of goods and services	+1.8	-10.7	+22.0	+7.1	-7.8	-9.1	-20.8	-14.5	-8.4	+1.1
Goods (f.o.b)	-0.4	-8.9	+27.0	+2.0	-9.7	-12.9	-23.0	-11.7	-7.8	+7.0
Services	+6.6	-14.4	+12.5	+19.2	-3.1	-0.1	-16.0	-20.3	-9.6	-11.2

1/ revised estimates

**Table 4 (cont'd) - Expenditure on GDP - Growth rates (% over corresponding period of previous year),
Q₁ 2008 - Q₄ 2011**

	2010	2011	2010 ¹				2011			
			Q1	Q2	Q3	Q4	Q1 ¹	Q2 ¹	Q3 ¹	Q4 ²
Final consumption expenditure	+2.7	+2.4	+2.4	+1.3	+3.8	+3.4	+3.2	+2.2	+2.4	+2.1
Households	+2.6	+2.5	+2.4	+2.2	+2.6	+3.1	+3.0	+1.8	+2.5	+2.7
General Government	+3.4	+2.3	+2.1	-2.9	+10.1	+4.9	+4.3	+4.0	+2.1	-0.9
Gross domestic fixed capital formation	-0.7	0.0	-1.3	+7.6	+10.5	-15.2	-1.2	-14.9	+2.6	+12.9
A. Building & construction work	+7.0	-2.2	-3.5	+10.4	+18.7	+2.7	-3.8	-12.5	0.0	+6.3
Residential building	+13.7	+14.1	+19.4	+17.9	+9.3	+9.7	+9.2	+1.2	+13.2	+30.1
Non residential building	-2.1	-18.6	-17.9	+5.0	+8.4	-3.2	-29.5	-25.1	-7.9	-14.8
Other construction work	+15.8	+1.9	-7.3	+10.4	+67.1	+3.5	+25.5	-9.5	-5.5	+6.8
B. Machinery & equipment	-15.3	+4.6	+4.5	+2.5	-6.9	-43.2	+4.2	-19.8	+9.9	+31.2
Passenger car	+19.3	-2.4	+26.8	+23.2	+3.6	+27.0	+1.0	+2.9	-6.4	-5.6
Other transport equipment	-58.8	+6.5	+5.8	-9.6	+29.6	-83.5	+18.3	+1.1	+6.1	+2.5
<i>Other transport equipment (excluding aircraft & marine vessel)</i>	+4.1	+6.5	-2.2	-15.1	+20.7	+13.9	+18.3	+1.1	+6.1	+2.5
Other machinery and equipment	-6.7	+5.8	+2.9	+3.4	-11.9	-21.7	+3.0	-25.4	+14.4	+47.7
Exports of goods and services	+14.1	+6.7	+13.5	+18.7	+9.8	+14.8	+14.5	+5.1	+12.1	-3.0
Goods (f.o.b)	+16.6	+5.3	+6.5	+23.7	+14.1	+21.4	+21.4	+5.9	+6.6	-8.1
Services	+12.1	+7.9	+19.0	+14.4	+6.0	+9.5	+9.7	+4.4	+17.5	+1.5
Less Imports of goods and services	+9.5	+6.4	+12.1	+9.8	+12.1	+4.4	+10.2	+2.8	+10.2	+2.4
Goods (f.o.b)	+7.1	+4.2	+11.4	+10.7	+8.0	+0.5	+11.3	-1.1	+4.0	+3.3
Services	+14.4	+10.7	+13.6	+7.8	+21.7	+14.4	+8.1	+11.8	+23.1	+0.3

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, tourism receipts from Bank of Mauritius, 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.

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.

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

4. Seasonal adjustment of quarterly GDP

Statistics 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.

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 estimated up to 2011. In the light of the new seasonal factors, the seasonally adjusted growth rates 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, 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 survey data are available. 	<ul style="list-style-type: none"> - Double deflation using Quarterly PPI-A for output and relevant Consumer Price Index (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. - Benchmark ratios from Agricultural Cost of Production Survey (ACOPS 2005) 	<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. - Benchmark ratios from Agricultural Cost of Production Survey (ACOPS 2005) 	<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.

Industry group	Data sources	Methods	Indicator - constant price estimates
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. - Benchmark ratios from Agricultural Cost of Production Survey (ACOPS 2005) 	<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.
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 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.
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).

Industry group	Data sources	Methods	Indicator - constant price estimates
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. 	
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 with base period as second quarter of 2009.

Industry group	Data sources	Methods	Indicator - constant price estimates
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 Consumer Price Index.
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 licences of lorries from the National Transport Authority - Lorry charges based on CEA and inflation. 	<ul style="list-style-type: none"> - Output based on the quarterly licences of lorries. - 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.

Industry group	Data sources	Methods	Indicator - constant price estimates
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.
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 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 data from the VAT systems from the Mauritius Revenue Authority (MRA). 	<ul style="list-style-type: none"> - Value added compiled from quarterly turnover obtained from the VAT systems. 	<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 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 updated from Household Budget Survey 2006/07. 	<ul style="list-style-type: none"> - Deflation by quarterly Consumer Price Index.

Industry group	Data sources	Methods	Indicator - constant price estimates
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. 	This sector comprises units which offer their services to different activities, both offshore and onshore. Their output consequently follows that of the respective activity groups.	- Deflation by Consumer Price Index.
. Public Administration & Defence; Compulsory Social Security			
Public Administration and Defence; Compulsory Social Security	- Expenditure of Central Government from the Accountant General Department.	- 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.	- 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.
M. Education services			
Education Services	- Expenditure of Ministry of Education from the Accountant General Department.	- 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. 	<ul style="list-style-type: none"> - Volume based on enrolment statistics. - Deflation by CPI component

Industry group	Data sources	Methods	Indicator - constant price estimates
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.
- 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 Consumer Price Index.
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 Consumer Price Index
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 Consumer Price Index.

P. Private Households with Employed Persons			
Private households with employed persons	- 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.	- Annual estimate based on the number of persons employed and average wage divided by 4.	- 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 Consumer Price Index.
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		
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>	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.

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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