

Wage Rate Index - Year 2011

1. Introduction

This issue of 'Economic and Social Indicators' presents wage rate indices for the four quarters of 2011 and year 2011.

The current series of the wage rate index introduced in the 1st quarter 2007 is based on the occupational structure of the working population in September 2006. As from the 1st quarter 2007, all wage rate indices refer to this base period, i.e. September 2006, and are being compiled and disseminated on a quarterly basis to satisfy the requirements of the International Monetary Fund (IMF) towards the Special Data Dissemination Standard (SDDS), to which Mauritius has graduated in February 2012.

As from year 2012, quarterly wage rate indices will be published in 'Economic and Social Indicators' at the end of the quarter following the reference period. The release dates are found in the advance calendar posted on the website of Statistics Mauritius (<http://statsmauritius.gov.mu>).

The wage rate index measures changes in the price of labour, i.e. changes in the average rates actually paid by employers to their employees for work during normal working hours. The methodology used for computing the index is given in the technical note at Annex.

2. Main movements in the Wage Rate Index, 1st to 4th Quarter 2011

The wage rate index (Base = September 2006), which stood at 142.4 in the 4th quarter 2010, increased by 0.9 point to 143.3 in the 1st quarter 2011. It increased further in the 2nd quarter (0.2 point) to 143.5, and in the 3rd quarter (2.1 points) to 145.6. In the 4th quarter 2011, the index remained at the same level as in the 3rd quarter. (Table 1 and Figure 1).

Table 2 gives the percentage change in the quarterly wage rate index by industry group. Main increases were observed in some industry groups: 'Agriculture, hunting, forestry and fishing' in the 3rd quarter (17.7%); 'Electricity, gas and water supply' in the 4th quarter (4.1%); 'Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods' in the 2nd quarter (3.1%) and 'Public administration and defence; compulsory social security' (3.0%) in the 1st quarter.

Decreases were observed in some industry groups: 'Agriculture, hunting, forestry and fishing' in the 1st quarter (-7.0%) and 4th quarter (-5.2%); 'Real estate, renting and business activities' in the 2nd quarter (-2.7%) and 3rd quarter (-0.8%); 'Hotels and restaurants' in the 1st quarter (-2.0%) and 3rd quarter (-0.7%).

In the 'Agriculture, hunting, forestry & fishing' sector, decreases resulted from lower wages being paid in the intercrop season (1st quarter) and the ending of the crop season (4th quarter). Decreases in other sectors were mainly due to the employment of new recruits.

3. Wage rate index, year 2011

3.1 Changes by industry

The wage rate index for the year, worked out as the average of the quarterly indices, was 144.5 for year 2011 (Table 3). It went up by 4.4 points (+3.1%) from 140.1 in 2010. This was due to an increase in wage rate across all industry groups.

The highest increase in wage rate was registered in ‘Agriculture, hunting, forestry and fishing’ (+6.3%) followed by ‘Manufacturing, mining and quarrying’ (+5.8%); ‘Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods’ (+4.2%); ‘Public administration and defence; compulsory social security’ (+3.8%) and ‘Construction’ (+3.6%).

3.2 Contribution of industry groups to the index

The main contributors to the increase of 4.4 points in the wage rate index for 2011 were ‘Manufacturing, mining and quarrying’ (+1.3 points), ‘Public administration and defence; compulsory social security’ (+1.0 point), and ‘Agriculture, hunting, forestry and fishing’ (+0.6 point).

3.3 Wage Rate Index for the General Government sector

The wage rate index for the General Government sector which comprises Ministries, Government departments and agencies operating under them, municipalities, district councils and Rodrigues Regional Assembly increased by 3.3% in 2011. The General Government sector which accounts for one third of the total weight of the wage rate index, contributed 1.6 points to the increase of 4.4 points in the overall index for 2011 (Table 3).

4. Comparison with previous indices

Table 4 gives a series of wage rate indices since 2001. Indices for years 2001 to 2006 have been computed on a yearly basis with September 2000 as base. As from 2007, quarterly indices are compiled with September 2006 as base.

The current series of the wage rate index is therefore not strictly comparable with the previous one because of different weighting patterns. However, to enable comparison, a rough estimate of the new wage index on the old base can be obtained by multiplying the new index by 1.421. Conversely, the wage index on the old base can be converted to the new base by dividing by 1.421.

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Table 1 - Quarterly wage rate indices by industry group, 2011
(Base : September 2006 = 100)

Industry group	Weight	2011			
		Qr 1	Qr 2	Qr 3	Qr 4
Agriculture, hunting, forestry and fishing	61	146.9	148.0	174.2	165.1
Manufacturing, mining and quarrying	170	138.7	137.4	141.1	141.8
<i>of which:</i>					
<i>Food (excluding sugar)</i>	39	130.3	130.2	130.7	132.3
<i>Sugar</i>	9	172.8	159.5	179.6	175.6
<i>Textiles</i>	70	141.6	138.8	144.2	144.1
<i>Other</i>	52	135.3	137.1	138.2	140.2
Electricity, gas and water supply	20	136.8	136.7	135.5	140.8
Construction	37	139.4	139.4	143.6	142.4
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	69	135.1	139.2	136.6	140.3
Hotels and restaurants	64	141.2	141.8	140.8	141.2
Transport, storage & communications	91	141.9	141.6	141.4	145.4
Financial intermediation	61	127.8	130.3	129.1	129.1
Real estate, renting and business activities	54	161.4	157.1	155.8	155.9
Public administration and defence; compulsory social security	170	150.7	151.3	152.4	152.1
Education	124	146.0	147.3	147.2	145.3
Health & social work	59	144.0	144.0	142.9	142.8
Other community, social and personal services	20	141.9	139.5	137.3	139.6
All sectors	1,000	143.3	143.5	145.6	145.6
<i>of which General Government</i> ¹	333	148.1	149.0	148.9	148.7

¹ ministries, government departments and agencies operating under them; municipalities; district councils and Rodrigues Regional Assembly

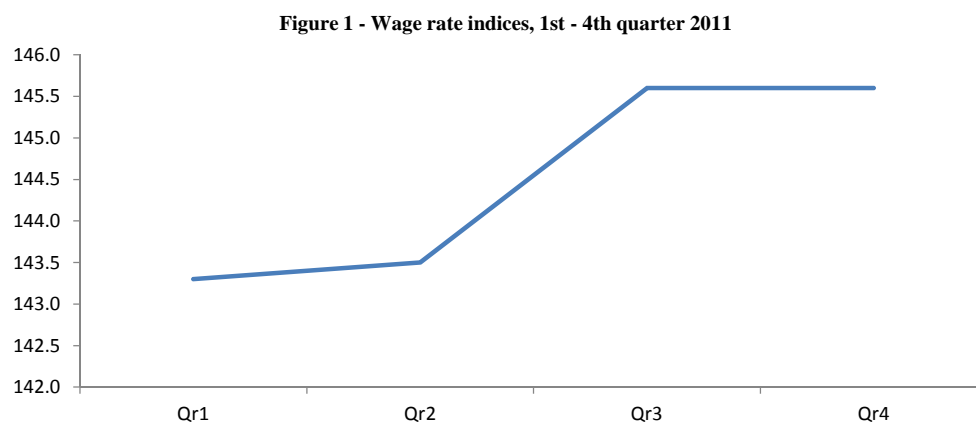


Table 2 - Percentage change in quarterly wage rate index by industry group and contribution of industry groups to overall change in index, 2011
(Base : September 2006 = 100)

Industry group	Weight	Qr 1		Qr 2		Qr 3		Qr 4	
		% change	Change in overall index point	% change	Change in overall index point	% change	Change in overall index point	% change	Change in overall index point
Agriculture, hunting, forestry and fishing	61	-7.0	-0.7	0.7	0.1	17.7	1.7	-5.2	-0.6
Manufacturing, mining and quarrying	170	1.9	0.4	-0.9	-0.2	2.7	0.6	0.5	0.1
<i>of which:</i>									
<i>Food (excluding sugar)</i>	39	1.3	0.1	-0.1	0.0	0.4	0.0	1.2	0.1
<i>Sugar</i>	9	0.4	0.0	-7.7	-0.1	12.6	0.2	-2.2	0.0
<i>Textiles</i>	70	3.1	0.3	-2.0	-0.2	3.9	0.4	-0.1	0.0
<i>Other</i>	52	1.0	0.1	1.3	0.1	0.8	0.1	1.4	0.1
Electricity, gas and water supply	20	-1.2	0.0	-0.1	0.0	-1.0	0.0	4.1	0.1
Construction	37	-0.1	0.0	0.0	0.0	3.0	0.2	-0.8	0.0
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	69	0.7	0.1	3.1	0.2	-1.9	-0.2	2.7	0.3
Hotels and restaurants	64	-2.0	-0.2	0.5	0.0	-0.7	-0.1	0.3	0.0
Transport, storage & communications	91	1.8	0.2	-0.2	0.0	-0.1	0.0	2.8	0.4
Financial intermediation	61	-1.0	-0.1	2.0	0.2	-0.9	-0.1	0.0	0.0
Real estate, renting and business activities	54	-0.6	0.0	-2.7	-0.2	-0.8	-0.1	0.0	0.0
Public administration and defence; compulsory social security	170	3.0	0.7	0.3	0.1	0.8	0.2	-0.2	0.0
Education	124	1.3	0.2	0.9	0.2	-0.1	0.0	-1.3	-0.2
Health & social work	59	2.1	0.2	-0.1	0.0	-0.7	-0.1	-0.1	0.0
Other community, social and personal services	20	1.1	0.0	-1.7	0.0	-1.6	0.0	1.7	0.0
All sectors	1,000	0.6	0.9	0.1	0.2	1.5	2.1	0.0	0.0
<i>of which General Government</i>	333	2.6	1.3	0.6	0.3	0.0	0.0	-0.2	-0.1

Table 3 - Wage rate index, percentage change and contribution of industry group, years 2010 & 2011
(Base : September 2006 = 100)

Industry group	Weight	Index 2010 ¹	Index 2011	% change	Change in overall index point
Agriculture, hunting, forestry and fishing	61	149.2	158.5	6.3	0.6
Manufacturing, mining and quarrying	170	132.1	139.7	5.8	1.3
<i>of which:</i>					
<i>Food (excluding sugar)</i>	39	125.4	130.9	4.4	0.2
<i>Sugar</i>	9	158.1	171.9	8.7	0.1
<i>Textiles</i>	70	133.5	142.2	6.5	0.6
<i>Other</i>	52	130.9	137.7	5.2	0.4
Electricity, gas and water supply	20	137.4	137.4	0.0	0.0
Construction	37	136.3	141.2	3.6	0.2
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	69	132.2	137.8	4.3	0.4
Hotels and restaurants	64	140.8	141.2	0.4	0.0
Transport, storage & communications	91	139.0	142.6	2.6	0.3
Financial intermediation	61	126.9	129.1	1.7	0.1
Real estate, renting and business activities	54	157.5	157.6	0.1	0.0
Public administration and defence; compulsory social security	170	146.0	151.6	3.9	1.0
Education	124	144.8	146.5	1.2	0.2
Health & social work	59	139.9	143.4	2.6	0.2
Other community, social and personal services	20	136.3	139.6	2.4	0.1
All sectors	1,000	140.1	144.5	3.1	4.4
<i>of which General Government</i>	333	143.9	148.7	3.3	1.6

Table 4 - Wage rate index, 2001 - 2011

Year	Wage Rate Index		Annual percentage change
	Base : September 2000 = 100	Base : September 2006 = 100	
2001	105.0		5.0
2002	109.9		4.7
2003	122.7		11.6
2004	130.4		6.3
2005	136.9		5.0
2006	142.1	100.0	3.8
2007		104.7	4.7
2008		119.0	13.7
2009		132.0	10.9
2010 ¹		140.1	6.1
2011		144.5	3.1

¹ Revised

Technical Note

Methodology used for the compilation of the wage rate index

1. Definition

The wage rate index measures changes in the price of labour, i.e. changes in the average rates actually paid by employers to their employees for work during normal working hours.

2. Approach adopted

Ideally to show genuine changes in the price of labour, it would have been necessary for wages of specific workers at specific establishments to be measured over time. Since this is practically impossible, the next best approach has been adopted, that is, to follow changes in the wages of groups of employees performing the same jobs. This gives a measure of changes in wage rates of specific occupations but has the following limitations:

- (i) any changes in the mix of employees within the selected occupations is bound to affect the calculated rates and hence the corresponding sectoral indices. Such changes can occur, for example, with a new intake of employees in a specific group - when the wages of the new recruits pull down the average wages for the whole group from one period to the next.
- (ii) wage adjustments resulting from changes in the tasks associated with a particular occupation, which cannot be separated from pure price changes of labour.
- (iii) it is difficult to separate the effects of productivity from the overall change.

3. Coverage

The wage rate index is based on wage rates applicable in 'large' establishments only. Employment in these establishments accounted for around 54% of total employment in year 2011. 'Large' establishments comprise sugar cane plantations of 10 hectares or more; tea plantations of 2 hectares or more; other agricultural and non-agricultural establishments having 10 or more employees as well as General Government Services, i.e. ministries, government departments and agencies operating under them; municipalities; district councils and Rodrigues Regional Assembly.

Time-rated as well as piece-rated wage earners and salaried employees are covered. Apprentices, workers on probation, part-time workers and employees working on a temporary basis are excluded.

4. Calculating the Wage Rate Index

A Laspeyres formula is used. The occupational structure is held constant with reference to the base period of the index, i.e September 2006. The relative changes in average wage rates are measured at the occupational level and these changes are then weighted to give a combined measure of the change. The following formula is used

$$I_t = \frac{\sum w_i (R_i^t / R_i^o)}{\sum w_i} \times 100$$

where I_t = index for quarter t compared to base period o
 w_i = $N_i^o R_i^o$ which represents the total wages paid to all employees in the ith occupation in base period, September 2006
 R_i^o = wage rate of occupation i in base period, September 2006
 R_i^t = wage rate of occupation i in quarter t

The index is first calculated for each industry group and the overall index (covering all industry groups) is computed as a weighted average of the individual industry group indices.

5. Reference period

The base period for the index is September 2006. The wage rate indices for the first, second, third and fourth quarters of 2007 and 2008 are based on wage rates applicable during the months of February, May, August and November respectively. As from 2009, the wage rate indices for the first to fourth quarter are based on wage rates applicable during the months of March, June, September and December respectively.

6. Weights

Two sets of weights are used.

- (i) The weights used for each occupation within a given industry group are based on the distribution of wages by occupation as obtained from a survey on employment and wage rates carried out in approximately 500 'large' establishments in September 2006.
- (ii) The weights for each industry group are based on the distribution of earnings by industry group as obtained from the Survey of Employment and Earnings carried out in around 2500 'large' establishments in March 2006.

7. Wage rates used

The wage/salary rates of specific occupations, used in the calculation of the index, are the rates paid for normal time work, comprising basic wages and salaries, cost of living allowances and other guaranteed and regular allowances paid at the end of each pay period. Overtime payments are therefore excluded.