

Wage Rate Index - Year 2009

1. Introduction

This issue of 'Economic and Social Indicators' presents wage rate indices for the four quarters of 2009 and year 2009.

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 graduation of Mauritius to the Special Data Dissemination Standard (SDDS).

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 Quarter to 4th Quarter 2009

A general upward movement is noted in the quarterly wage rate index across the four quarters of 2009. The overall index stood at 128.0 in the first quarter and rose by 0.8 points (+0.6%) to reach 128.8 in the 2nd quarter. In the 3rd quarter, it increased by 6.2 points (+4.8%) to 135.0 and in the 4th quarter increased by 1 point (+0.7%) to 136.0 (Table 1 and Figure 1). The highest increase (+4.8%) is noted in the 3rd quarter when salary/wage compensation was paid.

Table 2 gives the percentage change in the quarterly wage rate index by industry group and indicates a general increasing trend in wage rates over the quarters with significant increases in the 3rd quarter across all the industry groups. There were, however, decreases in some industry groups in the other quarters. The biggest decreases in terms of percentage were registered in 'Agriculture, hunting, forestry and fishing' in the 1st quarter (-4.0%) and the 4th quarter (-5.3%); 'Construction' in the 1st quarter (-5.3%), 'Health and social work' in the 2nd quarter (-5.7%); 'Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods' in the 3rd quarter (-3.0%) and 'Electricity, gas and water supply' in the 4th quarter (-2.1%).

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 2009

3.1 Changes by industry

The wage rate index for the year, worked out as the average of the quarterly indices, was 132.0 for 2009 (Table 3). It went up by 13.0 points (+10.9%) from 119.0 in 2008 to 132.0 in 2009. This was due to an increase in wage rate across all industry groups.

The highest increase in wage rate was registered in 'Real estate, renting and business activities' (+17.0%), followed by 'Public administration and defence; compulsory social security' (+15.8%). The lowest increase was registered in both 'Construction' and 'Financial intermediation' (+5.2%).

'Manufacturing, mining & quarrying' sector registered an increase of 6.1%.

3.2 Contribution of industry groups to the index

The main contributors to the increase of 13.0 points in the wage rate index for 2009 were 'Public administration and defence; compulsory social security' (+3.2 points), 'Education' (+2.3 points), 'Manufacturing, mining and quarrying' (+1.2 points), 'Real estate, renting and business activities' (+1.1 points) and 'Agriculture, hunting, forestry and fishing' (+1.0 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 15.1% in 2009 compared to 2008. This rise is higher than the increase of 10.9% registered for all sectors altogether. The General Government sector which accounts for 1/3 of the total weight of the wage rate index, contributed 6.1 points to the increase of 13.0 points in the overall index for 2009 (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.

Central Statistics Office
Ministry of Finance and Economic Empowerment
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Contact person: Mrs K. D Pothegadoo (Ag. Statistician) Central Statistics Office LIC Centre Port Louis Tel: 2122316 Fax: 2114150 Email: cso_labour@mail.gov.mu
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Table 1 - Quarterly wage rate indices by industry group, 2009**(Base : September 2006 = 100)**

Industry group	Weight	2009			
		Qr1	Qr2	Qr3	Qr4
Agriculture, hunting, forestry and fishing	61	115.5	119.3	153.8	145.7
Manufacturing, mining and quarrying	170	121.5	122.5	126.1	125.7
<i>of which:</i>					
<i>Food (excluding sugar)</i>	39	116.0	114.9	118.6	122.3
<i>Sugar</i>	9	124.4	123.2	145.0	145.8
<i>Textiles</i>	70	125.4	127.1	128.7	125.6
<i>Other</i>	52	120.0	121.9	124.9	125.0
Electricity, gas and water supply	20	119.9	119.7	138.2	135.3
Construction	37	117.6	122.2	128.1	131.0
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	69	128.5	134.7	130.6	132.1
Hotels and restaurants	64	123.3	127.1	134.8	139.4
Transport, storage & communications	91	125.9	126.4	132.4	135.0
Financial intermediation	61	117.7	117.2	120.4	123.7
Real estate, renting and business activities	54	130.9	132.3	143.2	147.8
Public administration and defence; compulsory social security	170	137.2	136.9	140.5	140.8
Education	124	138.1	137.7	140.4	142.3
Health & social work	59	136.6	128.8	136.8	136.2
Other community, social and personal services	20	128.2	131.8	130.7	133.1
All sectors	1,000	128.0	128.8	135.0	136.0
<i>of which General Government</i> ¹	333	137.7	136.0	140.0	140.1

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

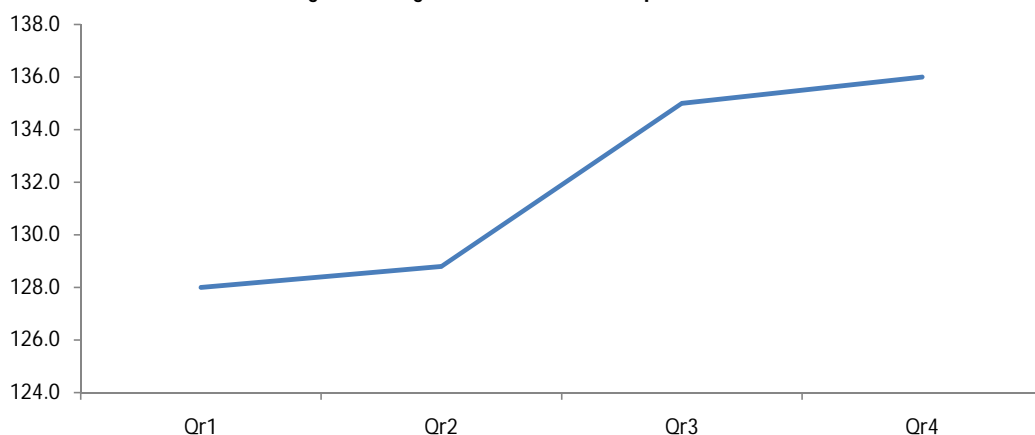
Figure 1 - Wage rate indices, 1st - 4th quarter 2009

Table 2 - Percentage change in quarterly wage rate index by industry group and contribution of industry groups to overall change in index, 2009
(Base : September 2006 = 100)

Industry group	Weight	Qr1 ¹		Qr2		Qr3		Qr4	
		% 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	-4.0	-0.3	3.3	0.2	28.9	2.1	-5.3	-0.5
Manufacturing, mining and quarrying	170	-0.6	-0.1	0.8	0.2	2.9	0.6	-0.3	-0.1
<i>of which:</i>									
<i>Food (excluding sugar)</i>	39	-0.9	0.0	-0.9	0.0	3.2	0.1	3.1	0.1
<i>Sugar</i>	9	2.3	0.0	-1.0	0.0	17.7	0.2	0.6	0.0
<i>Textiles</i>	70	-1.3	-0.1	1.4	0.1	1.3	0.1	-2.4	-0.2
<i>Other</i>	52	0.3	0.0	1.6	0.1	2.5	0.2	0.1	0.0
Electricity, gas and water supply	20	-0.4	0.0	-0.2	0.0	15.5	0.4	-2.1	-0.1
Construction	37	-5.3	-0.2	3.9	0.2	4.8	0.2	2.3	0.1
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	69	-0.2	0.0	4.8	0.4	-3.0	-0.3	1.1	0.1
Hotels and restaurants	64	-1.4	-0.1	3.1	0.2	6.1	0.5	3.4	0.3
Transport, storage & communications	91	-0.2	0.0	0.4	0.0	4.7	0.5	2.0	0.2
Financial intermediation	61	2.3	0.2	-0.4	0.0	2.7	0.2	2.7	0.2
Real estate, renting and business activities	54	0.8	0.1	1.1	0.1	8.2	0.6	3.2	0.2
Public administration and defence; compulsory social security	170	0.6	0.1	-0.2	-0.1	2.6	0.6	0.2	0.1
Education	124	1.1	0.2	-0.3	0.0	2.0	0.3	1.4	0.2
Health & social work	59	1.3	0.1	-5.7	-0.5	6.2	0.5	-0.4	0.0
Other community, social and personal services	20	1.1	0.0	2.8	0.1	-0.8	0.0	1.8	0.0
All sectors	1,000	-0.1	-0.1	0.6	0.8	4.8	6.2	0.7	1.0
<i>of which General Government</i>	333	0.4	0.2	-1.2	-0.6	2.9	1.3	0.1	0.0

¹ Revised - Change in index relative to Q1 2009 over Q4 2008

Table 3 - Wage rate index, percentage change and contribution of industry group, year 2009¹
(Base : September 2006 = 100)

Industry group	Weight	Index	% change ²	Change in overall index point ²
Agriculture, hunting, forestry and fishing	61	133.6	13.3	1.0
Manufacturing, mining and quarrying	170	124.0	6.1	1.2
<i>of which:</i>				
<i>Food (excluding sugar)</i>	39	118.0	5.4	0.2
<i>Sugar</i>	9	134.6	15.3	0.2
<i>Textiles</i>	70	126.7	5.6	0.5
<i>Other</i>	52	123.0	5.6	0.3
Electricity, gas and water supply	20	128.3	13.2	0.3
Construction	37	124.7	5.2	0.2
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household	69	131.5	6.8	0.6
Hotels and restaurants	64	131.2	8.9	0.7
Transport, storage & communications	91	129.9	7.7	0.8
Financial intermediation	61	119.8	5.2	0.4
Real estate, renting and business activities	54	138.6	17.0	1.1
Public administration and defence; compulsory social security	170	138.9	15.8	3.2
Education	124	139.6	15.4	2.3
Health & social work	59	134.6	12.9	0.9
Other community, social and personal services	20	131.0	13.1	0.3
All sectors	1,000	132.0	10.9	13.0
<i>of which General Government</i>	333	138.5	15.10	6.1

¹ Calculated using the average wage for the year

² Relative to year 2008

Table 4 - Wage rate index, 2001 - 2009

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 ¹		104.7	4.7
2008 ¹		119.0	13.7
2009		132.0	10.9

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 56% of total employment in year 2009. '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.

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.