

WAGE RATE INDEX – 2001

1. Introduction

This issue of 'Economic and Social Indicators' presents the wage rate index for the year 2001 with September 2000 as base.

Wage rate index was first computed by the Central Statistics Office in 1993; the index which was published on an annual basis had September 1992 as base, and weighting pattern according to 1990 Census occupational structure of the working population and the March 1992 distribution of earnings in 'large' establishments.

The index which is of a fixed base type is affected by changes in the relative importance of occupations in the economy, and hence the need for update.

The index presented in this issue has been compiled with September 2000 as base; weights have been updated according to the occupational structure obtained at Census 2000 and distribution of earnings at March 2000. Results are therefore not strictly comparable with previous series. The methodology used for the calculation of the updated index is described at Annex.

2. Industrial Classification

Industrial classification used is according to the National Standard Industrial Classifications (NSIC), which is an adaptation of the International Standard Industrial Classification of all Economic Activities (ISIC), Revision 3 of year 1990. The current classification supersedes the previous one, namely ISIC, Revision 2 of year 1968.

Due to lack of data, the transition to the new classification could not be done earlier.

3. Index 2001

3.1 *Wage rate index by industry*

Between September 2000 and September 2001, the overall wage rate index has risen by 5.1 points, from 100 to 105.1.

Table 1 gives the sub-indices by major industry group for year 2001. A general upward movement in the sub-indices is noted for all industry groups, the values ranging from 101.7 for 'Public administration and defence' to 116.2 for 'Electricity and water'.

Sub-indices for 'Manufacturing, mining & quarrying' and 'Public administration and defence', which have strong effects on the overall index because of their important weights, were 104.1 and 101.7 respectively.

3.2 Contribution of the industry groups to the index

The contribution of the industry groups to the overall index is shown in Table 2. Industry groups which contribute most to the increase of 5.1 points in the overall index were 'Agriculture and fishing', 1.0 point and 'Manufacturing, mining & quarrying', 0.9 point. Contributions of the remaining industry groups range from 0.1 to 0.4 point.

3.3 Change in wage rate index by industry

Table 3 shows the changes in the wage rate index by industry group. The highest increase, of the order of 16.2%, was noted in the 'Electricity and water', followed by 'Real estates, renting and business activities', 11.3% and 'Agriculture and fishing', 10.7%.

The 'Construction', 'Wholesale and retail trade' and 'Hotels and restaurants' industry groups registered increases of 6.6%, 5.8% and 5.6% respectively. Increases of 4% - 5% were noted in the following four groups : 'Manufacturing, mining & quarrying', 'Financial intermediation', 'Health & social work' and 'Other community, social and personal services'. The smallest increase, 1.7%, was observed in 'Public administration and defence'

3.4 Comparison with previous indices

Table 4 gives a series of wage rate indices since 1993. Indices for the year 1993 to 2000 have been computed using September 1992 as base while the index for year 2001 has been worked out with September 2000 as base.

The two series are not strictly comparable since they are based on different weighting patterns. However, for some particular purposes, users may want to compare the old indices with the new ones. A crude method of converting an index from the new base to the old base is by

multiplying the new index by the 1.994. Conversely, an index on the old base can be converted to the new base by dividing the old index by 1.994.

The conversion factor (1.994) is obtained as the ratio of the wage rate index of year 2000 on old base (199.4) to wage rate index of year 2000 on new base (100.0).

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Table 1 - Wage rate index by industry group, 2001
(Base : September 2000 = 100)

Industry group	Weights	Index 2001
Agriculture and fishing	92	110.7
Manufacturing, mining & quarrying	231	104.1
Electricity and water	18	116.2
Construction	49	106.6
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	68	105.8
Hotels and restaurants	47	105.6
Transport, storage & communications	83	103.4
Financial intermediation	42	104.6
Real estate, renting and business activities	38	111.3
Public administration and defence; compulsory social security	173	101.7
Education	86	103.6
Health & social work	54	104.9
Other community, social and personal services	19	104.5
All sectors	1,000	105.1
<i>of which General Government</i>	<i>310</i>	<i>102.7</i>

Table 2 - Contribution of industry groups to change in index, 2000 - 2001

Industry group	2000 - 2001
Agriculture and fishing	1.0
Manufacturing, mining & quarrying	0.9
Electricity and water	0.3
Construction	0.3
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	0.4
Hotels and restaurants	0.3
Transport, storage & communications	0.3
Financial intermediation	0.2
Real estate, renting and business activities	0.4
Public administration and defence; compulsory social security	0.3
Education	0.3
Health & social work	0.3
Other community, social and personal services	0.1
All sectors	5.1
<i>of which General Government</i>	<i>0.8</i>

Table 3 - Annual percentage change in wage rate index by industry group, 2000 - 2001

Industry group	Percentage change 2000 - 2001
Agriculture and fishing	10.7
Manufacturing, mining & quarrying	4.1
Electricity and water	16.2
Construction	6.6
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal & household goods	5.8
Hotels and restaurants	5.6
Transport, storage & communications	3.4
Financial intermediation	4.6
Real estate, renting and business activities	11.3
Public administration and defence; compulsory social security	1.7
Education	3.6
Health & social work	4.9
Other community, social and personal services	4.5
All sectors	5.1
<i>of which General Government</i>	2.7

Table 4 - Wage rate index, 1993 - 2001

Year	Wage Rate Index		Annual percentage change
	Base : September 1992 = 100	Base : September 2000 = 100	
1993	115.5		15.5
1994	127.6		10.5
1995	136.6		7.1
1996	144.0		5.4
1997	160.7		11.6
1998	177.5		10.5
1999	191.0		7.6
2000	199.4	100.0	4.4
2001		105.1	5.1

**Table 5 - Average wage per hour of selected occupations by industry group
(excluding General Government), September 2000 - September 2001**

Industry group	Occupation	Average wage ¹ per hour (Rs)		Change (%) 2000 to 2001
		2000	2001	
Agriculture				
Sugarcane plantations	Overseer - Grade I	52.59	55.37	5.3
	Field worker (other than special cat.)	39.05	44.83	14.8
Tea plantations	Field worker	22.24	23.86	7.3
	Sirdar/Gangman	32.00	33.00	3.1
Manufacturing				
Poultry & other meat	Farm worker	29.47	32.19	9.2
	Factory worker	26.24	28.80	9.8
Biscuits & confectionery	Machine operator	29.02	30.17	4.0
	Factory worker	15.64	16.45	5.2
Sugar	Fitter - Grade I	39.34	42.42	7.8
	Welder - Grade I	37.64	40.48	7.5
	Motor mechanic (HMU)	39.96	42.57	6.5
	Factory operator - Grade I	32.04	32.77	2.3
Tea	Factory worker	22.98	23.87	3.9
	Factory operator	25.03	26.57	6.2
Soft drinks	Beverage machine operator	31.10	30.36	-2.4
	Driver/Salesman	41.72	42.67	2.3
	Lorry helper	32.35	35.53	9.8

- ¹ (a) Wages include remuneration for normal time work inclusive of cost of living allowances and other guaranteed and regularly paid allowances
(b) Average wage per hour is not strictly comparable with previous series following changes in sampled establishments

**Table 5 (cont'd) - Average wage per hour of selected occupations by industry group
(excluding General Government), September 2000 - September 2001**

Industry group	Occupation	Average wage ¹ per hour (Rs)		Change (%) 2000 to 2001
		2000	2001	
Textiles (excluding wearing apparel)	Factory worker	22.21	23.53	5.9
	Cleaner/Helper	15.85	16.92	6.8
	Machine operator	24.29	26.05	7.2
Wearing apparel (excluding footwear)	Machine operator	18.43	18.73	1.6
	Weaver/Knitter	21.68	23.80	9.8
	Cleaner/Helper	16.43	17.34	5.5
Leather products	Machine operator	21.97	25.18	14.6
Footwear	Shoemaking machine operator	19.89	20.80	4.6
Paper products	Machine operator	28.83	31.49	9.2
Printing & publishing	Reporter/Journalist	107.96	111.65	3.4
	Photo-type setting operator	49.00	52.99	8.1
Chemical products	Mixing/Blending machine operator	43.09	45.31	5.2
	Cleaner/Helper	23.98	27.63	15.2
Rubber products	Machine operator	23.71	25.80	8.8
Plastic products	Machine operator/Factory operator	23.88	24.56	2.8

- ¹ (a) Wages include remuneration for normal time work inclusive of cost of living allowances and other guaranteed and regularly paid allowances
(b) Average wage per hour is not strictly comparable with previous series following changes in sampled establishments

**Table 5 (cont'd) - Average wage per hour of selected occupations by industry group
(excluding General Government), September 2000 - September 2001**

Industry group	Occupation	Average wage ¹ per hour (Rs)		Change (%) 2000 to 2001
		2000	2001	
Basic metals	Machine operator	28.67	31.66	10.4
	Factory worker	30.03	31.29	4.2
Fabricated metal products	Factory worker	32.14	35.97	11.9
Electrical machinery & apparatus	Technician	29.76	32.10	7.9
	Electrician	33.39	36.48	9.3
Furniture (wooden)	Cabinet Maker/Varnisher	32.93	34.24	4.0
Jewellery & related articles	Diamond cutter/Polisher	23.50	24.91	6.0
Electricity	Lineman	56.23	69.56	23.7
	Power generating machine operator	57.61	70.39	22.2
	Meter reader	64.94	77.64	19.6
Water	Meter reader	56.91	56.65	-0.5
	Tradesmen/Assistant tradesman	44.87	47.11	5.0
	Labourer/Unskilled worker	33.25	36.12	8.6
Construction	Mason - Grade I	35.04	37.53	7.1
	Carpenter - Grade I	37.07	36.95	-0.3
	Labourer/Helper	26.14	25.33	-3.1
Wholesale, retail trade, repair of motor vehicles				
Wholesale trade	Salesperson/Sales representative	73.73	77.22	4.7

- ¹ (a) Wages include remuneration for normal time work inclusive of cost of living allowances and other guaranteed and regularly paid allowances
(b) Average wage per hour is not strictly comparable with previous series following changes in sampled establishments

**Table 5 (cont'd) - Average wage per hour of selected occupations by industry group
(excluding General Government), September 2000 - September 2001**

Industry group	Occupation	Average wage ¹ per hour (Rs)		Change (%) 2000 to 2001
		2000	2001	
Retail trade	Salesperson	38.74	43.90	13.3
Repair of motor vehicles	Garage mechanic - Grade I	27.85	28.14	1.0
	Panel beater - Grade I	29.79	33.76	13.3
Hotels				
	Receptionist	33.25	33.67	1.3
	Waiter	24.07	25.32	5.2
	Cook	33.13	35.66	7.6
	Maid/Servant	24.82	26.64	7.3
Transport, storage & communication				
Bus Transport	Bus driver	38.69	40.18	3.9
	Bus conductor	34.87	37.30	7.0
Communication	Telephone installer/Service	57.42	59.77	4.1
	Telephone operator	79.14	82.75	4.6
	Telecom technician	98.04	101.50	3.5
Financial intermediation				
Banks	Bank teller	72.06	74.24	3.0
	Clerk/Senior clerk	86.01	90.81	5.6
	Messenger	38.34	38.88	1.4
Insurance	Insurance clerk	57.28	57.00	-0.5
	Clerk/Senior clerk	68.36	72.23	5.7

- ¹ (a) Wages include remuneration for normal time work inclusive of cost of living allowances and other guaranteed and regularly paid allowances
(b) Average wage per hour is not strictly comparable with previous series following changes in sampled establishments

**Table 5 (cont'd) - Average wage per hour of selected occupations by industry group
(excluding General Government), September 2000 - September 2001**

Industry group	Occupation	Average wage ¹ per hour (Rs)		Change (%) 2000 to 2001
		2000	2001	
Real estate, renting and business activities				
Accounting & auditing services	Accountant/Auditor	126.82	142.15	12.1
	Accounts clerk	28.09	32.75	16.6
Architectural & engineering services	Draughtmans	77.00	75.21	-2.3
	Engineers	152.39	153.52	0.7
Private education services				
	Pre-primary education teacher	36.04	37.60	4.3
	Primary education teacher	95.70	109.03	13.9
	Education officer	120.82	124.32	2.9
	Cleaner/Caretaker	30.81	32.67	6.0
Private health services				
	Qualified/Professional nurse	65.11	70.92	8.9
	Nursing aid	27.65	28.58	3.4
Cleaning Services				
	Office/Building cleaner	18.12	17.97	-0.8
	Scavenger/Garbage collector	18.69	21.53	15.2

¹ (a) Wages include remuneration for normal time work inclusive of cost of living allowances and other guaranteed and regularly paid allowances

(b) Average wage per hour is not strictly comparable with previous series following changes in sampled establishments

**Table 6 - Average wage/salary per month of selected occupations in General Government,
September 2000 - September 2001**

Occupation	2000 (Rs)	2001 (Rs)	Change (%) 2000 to 2001
Ministries/Departments			
Medical and Health officer	25,395	27,027	6.4
Education officer	17,347	17,572	1.3
Nursing officer	10,374	10,865	4.7
Teacher/Senior teacher	10,868	11,104	2.2
Clerical officer/Higher clerical officer	8,368	8,570	2.4
Police constable	9,561	9,632	0.7
Mason	7,481	7,999	6.9
Carpenter	8,096	8,550	5.6
Driver	7,283	7,592	4.2
Hospital servant	6,793	7,034	3.5
Labourer	6,060	6,310	4.1
Municipalities/District Councils			
Inspector/Assistant Inspector (Health)	10,938	11,435	4.5
Clerical officer	7,216	7,908	9.6
Gardener	5,997	6,374	6.3
Mason	7,463	7,858	5.3
Carpenter	7,314	7,918	8.3
Driver	6,937	7,199	3.8
Refuse collector	5,927	6,017	1.5
Labourer	5,479	5,796	5.8

Methodology used for the computation of the 2001 Wage rate index

1. Approach adopted

Ideally to show genuine changes in the price of labour, it would have been necessary for wages of specific individual 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.

2. Index calculation

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.

A Laspeyres type fixed base-weighted formula is used, where the occupational structure is held constant with reference to base year 2000. The changes in average wage rates are measured at the occupational level and the magnitude of these changes are then weighted to give a combined measure of the change for a given industry group. The following formula is used

$$I_t = \frac{\sum W_i (R_{it} / R_{io})}{\sum W_i} \times 100$$

where I_t = index for year t compared to base year o for a given industry
 W_i = weight of occupation i
 R_{io} = wage rate of occupation i in base year o
 R_{it} = wage rate of occupation i in year t

The aggregate indices for industry groups at higher level of classification or for all economic activities as a whole, are computed by taking a weighted average of the individual industry group indices.

3. Weightings

- (i) Census 2000 data on employment by occupation and wage rates at base year are used to determine the weighting pattern of occupations (W_i) for given industry groups.
- (ii) Distribution of earnings by industry group obtained at the March 2000 Survey of Employment and Earnings in large establishments is used as weights in the computation of aggregate indices for higher levels of industry groups or for all economic activities.

4. Data collection

Wage rates (R_i) for selected occupations are worked out from data obtained from the Survey of Employment, Earnings and Hours of work carried out in September of every year. About 500 establishments are surveyed and asked to provide information on employment, hours of work and components of earnings for selected occupations.

5. Selection of occupations

Selected occupations within an industry group are those having the largest number of employees as enumerated at the 2000 Population Census.

It is to be noted that within the occupations, both time-rated and piece-rated workers are covered. However, employees such as apprentices, part-time workers and employees working on a temporary basis have been excluded.

6. Selection of establishments

Wage data are collected on a sample basis from 'large' establishments only. These 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/Departments, Municipalities/District Councils and agencies operating under Ministries.

The frame consists of a list of all 'large' establishments (about 2,400) as at March 2000. Establishments were stratified according to industry and arranged in order of size, i.e., the number of employees, within the industry group. Within the strata, selection was proportional to size. A sample of about 20% was surveyed, representing some 500 establishments.

7. Limitations

The following limitations as regards the approach adopted are to be noted:

- (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.
- (iii) it is difficult to separate the effects of productivity from the overall change.