

Craftsmen and labourers' wages and price indices in India in 1913 constant rupee, 1800-2000

Introduction

Although not reported, these data are related to the thesis:

Bas van Leeuwen, *Human Capital and Economic Growth in India, Indonesia, and Japan: A quantitative analysis, 1890-2000*, PhD thesis, Utrecht University 2007.

Please be aware that the data from 1870 onwards are also reported in the thesis and are therefore also available above.

To construct these series, we have used largely published data. Furthermore, we focused on cash earnings, ignoring payments in kind. As far as possible the skilled wages are represented by carpenters, in some cases added with bricklayers. The unskilled workers are generally represented by 'unskilled labour' or 'agricultural labour'. The table at the end of this text gives the real wages in 1913 prices together with the consumer price index. This makes it possible to construct the nominal wages. Below section presents how the data are constructed.

Data construction

The *skilled* and *unskilled wages* for India for 1951-1954; 1957-1958; 1967-2000 were taken from the *ILO Year Book of Labour Statistics* (1951-1958), the *International Labour Review* (1959-1961), and the *Bulletin of Labour Statistics* (1962-2001). Skilled wages were, where possible, constructed as an average of bricklayers and carpenters in construction and unskilled wages were taken from unskilled labour. For 1955-1956, and 1959-1966 we took for unskilled and skilled wages the relation with agricultural wages and manufacturing wages of the ILO respectively for 1954, 1957, 1958, and 1968. The relations were calculated with the wages in agriculture and manufacturing respectively. Next, these relations were interpolated, and finally multiplied with the agricultural and manufacturing wages. For the period 1913; 1919-1946 we took the data of Sivasubramonian (1977). For both the skilled and unskilled wages we averaged urban and rural areas. Again for the unskilled wage, we interpolated the relation with ILO agricultural wages for 1947-1950 and multiplied this interpolated relation with the agricultural wages. For the skilled wage we used the manufacturing wage in 1950, and the relation between the skilled wage from Sivasubramonian (1977) and ILO wages in

manufacturing in 1946 multiplied with the ILO manufacturing wage in 1947 for the year 1947. For 1947 and 1950 we interpolated the relation between the wages in the jute textile industry (Mukerjee 1960) and the 1947 and 1950 skilled wage. Multiplying this interpolation with the jute textile industry wages gave the skilled wage for 1948 and 1949.

For 1873-1912 the unskilled and skilled wages were obtained from the *Statistical Abstract of British India*, which draws from the *Prices and Wages in India* series. We only used the series mentioned in the *Statistical Abstract* that belong to present day India. The wages were for selected stations (i.e. cities) and are weighed per State by the inverse population of the city because in general there are higher wages in more populous cities while the countryside is far larger. Then the States were weighted for their population as in general middle India was somewhat more populous with higher wages.

For 1800-1872 we used several sources, mainly gazetteers, historical memoirs and Divekar (1989b) to obtain unskilled and skilled wages for North, and Middle India. For South

Table 1: Day wages in North, Middle, and South India 1810-1876						
		1810	1830	1850	1871	1876
North India	coolies/labourers	0.11	0.08	0.09	0.14	0.14
	bricklayers	0.16	-	0.19	0.25	0.28
	carpenters	0.13	-	0.16	0.25	0.31
	Blacksmiths	-	-	0.13	0.19	0.31
Middle India	coolies/labourers	0.11	0.11	0.15	0.22	0.16
	bricklayers	0.31	0.31	0.43	0.66	0.66
	carpenters	0.31	0.31	0.43	0.66	0.66
	Blacksmiths	0.31	0.31	0.43	0.66	0.66
South India	coolies/labourers	-	-	0.05	0.10	0.13
	bricklayers	-	-	0.17	0.25	0.38
	carpenters	-	-	0.17	0.25	0.38
	Blacksmiths	-	-	0.17	0.25	0.38
Sources:						
<i>North India</i> : 1810, 1830 and 1871 Meerut (Atkinson Vol III, p. 303), 1850 and 1871 Banda (Atkinson Vol. I, p. 119)						
<i>Middle India</i> : Kolaba (Campbell, Vol. XI, p. 106-107), labour 1876 Khandesh (Campbell, Vol. XII, p. 200-201).						
<i>South India</i> : Ganjam District (Leman 1882). Ganjam is in the extreme Northeast of the Madras Presidency, almost at the same latitude as Bombay. However as Middle India is defined as the line going northeast from Bombay to Calcutta, Ganjam falls under South India.						

India not many figures were found yet but these wages seem to correspond to those in North India (see table 1). For unskilled labour, we chose mainly coolies, labourers and agricultural labourers, which exhibit the same trend. The same goes for skilled labour where we chose carpenters and bricklayers. These wage series were weighted for the population to obtain the all-India average.

The Indian *CPI* for 1949-2000 was obtained from the *ILO Year Book of Labour Statistics*. For 1961-1968 the cities of Jamshedpur, Bombay and Delhi were averaged to obtain one series. For 1969-2000 the average of the agricultural workers, industrial workers, and urban non-manual employees' series was used. For 1900-1946 and 1948 we used the index of Sivasubramonian (2000, p. 437). We obtained the 1947 number by calculating the relation of the Sivasubramonian index with the series of Roy (1996, p. 352) for 1946 and 1948. This relation was linearly interpolated and multiplied with the 1947 figure of Roy. For 1861-1899 we used the revised series from Brahmananda (2001, p. 123). These series strongly resembles the Government of India's series, but here some more consumer goods are

Table 2 India percentage consumption expenditure by major groups				
	North	East/Middle	Middle	South
	United Provinces	Bengal & Assam	Bombay Province	Madras Province
	excluding Calcutta	excluding Bombay city	excluding Madras city	
Food	38.7%	41.6%	39.8%	40.6%
Fuel & lighting	5.1%	4.7%	5.9%	5.2%
Clothing	9.7%	7.6%	10.3%	10.3%
Furniture and household requisites	2.4%	1.6%	2.0%	2.1%
Housing	6.2%	6.3%	7.4%	7.4%
Miscellaneous	37.9%	38.2%	34.6%	34.4%
Total	100.0%	100.0%	100.0%	100.0%

included.¹ To link the Sivasubramonian and the Brahmananda indices we used the index from Williamson (1998). The Indian prices prior to 1863 were taken from gazetteers and from

Table 3: Percentage consumption expenditure for food groups in India				
	North	East/Middle	Middle	South
	United Provinces	Bengal & Assam	Bombay Province	Madras Province
	Excluding Calcutta	Excluding Bombay city	Excluding Madras city	
Cereals	44.4%	47.7%	38.8%	43.2%
Pulses	13.0%	5.9%	11.1%	8.1%
Milk & fats	25.2%	24.0%	33.0%	37.0%
Vegetables	8.5%	9.5%	8.3%	4.0%
Condiments	2.0%	2.4%	2.1%	2.8%
Animal food	1.6%	5.7%	0.0%	0.0%
Miscellaneous	5.4%	4.8%	6.6%	4.9%
Total	100%	100%	100%	100%

¹ Brahmananda 2001, p. 119.

Divekar (1989a and b). Unfortunately there is a clear difference between South, Middle and North India in terms of the quantity of each good consumed, especially concerning rice and wheat that constitute a large share of cereals in the class ‘food’. To identify this we took a survey of middle class government employees in 1948 to compare these parts of India (see table A.1.2). Of course the goods consumed differed from those consumed by the lower classes and furthermore the income was higher than in 1860. However, because the data before 1860 relate largely to food items, this causes no problem.

Interestingly the difference between the several ‘food’ categories in table 2 is not large. This changes somewhat if we look at the division of the category ‘food’ in table 3. The largest difference however, constitutes rice, which is in North India only 14.9% of total food consumption while in South India it is 39.2%. We constructed our CPI for the period 1800-1861 for South, Middle, and North India. To this end

Table 4: Construction of CPI India 1800-1880												
		<i>North India</i>					<i>Middle India</i>			<i>South India</i>		
		1800-1822	1822-1823; 1846-1867	1823-1846	1867-1872	1872-1880	1800-1830	1830-1859	1859-1876	1800-1857	1857-1858	1858-1876
food	Cereals	100.0%	49.3%	42.8%	49.3%	77.3%	36.9%	39.6%	74.7%	84.2%	43.3%	39.9%
	Pulses	-	14.4%	12.5%	14.4%	22.7%	10.5%	11.3%	21.3%	15.8%	8.1%	7.5%
	Milk & fats	-	28.0%	24.3%	28.0%	-	31.4%	33.7%	-	-	37.1%	34.2%
	Vegetables	-	-	-	-	-	-	-	-	-	-	-
	Condiments	-	2.2%	1.9%	2.2%	-	2.0%	2.1%	4.0%	-	-	2.6%
	Animal food	-	-	1.5%	-	-	-	-	-	-	-	-
	Miscellaneous	-	6.0%	5.2%	6.0%	-	6.3%	-	-	-	-	4.5%
Total		100.0%	100.0%	88.4%	100.0%	100.0%	87.1%	87.1%	100.0%	100.0%	88.6%	88.7%
Fuel and lighting		-	-	11.6%	-	-	12.9%	12.9%	-	-	11.4%	11.4%
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of products		2	9	13	8	3	9	8	5	3	5	7

we took the available price series and classified them by group of expenditure and (within the group ‘food’) by classes (cereals, pulses, etc.). Within each class we further subdivided when possible. For example cereals could be divided in rice, wheat, and other cereals. Each of these groups, classes and sub-classes was weighed on the basis of the *Survey of Middle Class Government Employees*. If products within a class were not available, it was assumed that the weights attached to those products were spread over the other products in the class concerned. The same method was used for the weighing of expenditure groups. As a consequence, if there is only one series for one group, then the product is assumed to be representative for the entire group. Equally, if no data are present for a group, the importance of the other groups is increased to 100% and the series thus created are linked (see table 4).

Data

This table presents the daily wages of craftsmen and labourers in India in constant 1913 rupees.

Table 5: Real (1913 prices) daily wages for craftsmen and labourers and CPI for Japan, India, and Indonesia, 1800-2000			
	India		
	labourer	Craftsman	CPI Index
	1913 Rupee	1913 Rupee	1913=100
1800	0.23	0.41	45.80
1801	0.27	0.48	40.17
1802	0.19	0.34	57.57
1803	0.18	0.33	60.83
1804	0.13	0.23	86.63
1805	0.19	0.34	59.98
1806	0.20	0.37	56.59
1807	0.21	0.39	55.14
1808	0.24	0.44	49.71
1809	0.29	0.53	41.19
1810	0.25	0.45	49.42
1811	0.24	0.43	52.51
1812	0.23	0.44	52.60
1813	0.21	0.41	57.55
1814	0.22	0.45	53.15
1815	0.25	0.55	44.43
1816	0.25	0.55	45.08
1817	0.22	0.48	51.92
1818	0.23	0.50	50.43
1819	0.25	0.56	45.06
1820	0.23	0.51	49.92
1821	0.24	0.54	47.28
1822	0.27	0.61	42.51
1823	0.27	0.63	41.43

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Table 5: Real (1913 prices) daily wages for craftsmen and labourers and CPI for Japan, India, and Indonesia, 1800-2000

	India		
	labourer	Craftsman	CPI Index
	1913 Rupee	1913 Rupee	1913=100
1824	0.20	0.48	55.31
1825	0.23	0.55	47.91
1826	0.25	0.63	42.63
1827	0.29	0.74	36.59
1828	0.29	0.74	36.93
1829	0.27	0.69	39.63
1830	0.32	0.83	33.13
1831	0.34	0.91	30.49
1832	0.30	0.80	35.02
1833	0.28	0.76	37.19
1834	0.34	0.94	30.33
1835	0.34	0.96	29.86
1836	0.32	0.92	31.34
1837	0.29	0.83	35.30
1838	0.28	0.83	35.60
1839	0.28	0.84	35.34
1840	0.32	0.97	30.82
1841	0.33	1.00	29.98
1842	0.33	1.02	29.64
1843	0.35	1.08	28.17
1844	0.29	0.91	33.84
1845	0.27	0.84	36.86
1846	0.29	0.91	34.25
1847	0.32	1.00	31.04
1848	0.29	0.91	34.07
1849	0.29	0.91	34.22
1850	0.37	1.00	31.11
1851	0.36	0.95	32.94
1852	0.39	1.01	30.90
1853	0.36	0.91	34.57
1854	0.32	0.79	39.72
1855	0.31	0.75	41.56
1856	0.36	0.85	36.81
1857	0.34	0.79	39.59
1858	0.30	0.67	47.75
1859	0.30	0.66	48.39
1860	0.30	0.90	49.35
1861	0.30	0.88	51.25
1862	0.30	0.90	50.62
1863	0.26	0.72	63.60
1864	0.20	0.55	83.12
1865	0.23	0.56	83.31
1866	0.23	0.56	83.85
1867	0.26	0.62	75.93
1868	0.29	0.70	67.65
1869	0.28	0.69	69.76
1870	0.27	0.69	70.65

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	India		
	labourer	Craftsman	CPI Index
	1913 Rupee	1913 Rupee	1913=100
1871	0.33	0.84	57.91
1872	0.31	0.78	62.46
1873	0.32	0.76	64.88
1874	0.28	0.70	71.63
1875	0.33	0.80	63.06
1876	0.36	0.83	62.68
1877	0.28	0.64	80.99
1878	0.24	0.58	87.04
1879	0.26	0.61	79.69
1880	0.30	0.72	69.37
1881	0.33	0.81	62.78
1882	0.37	0.81	61.41
1883	0.36	0.82	61.96
1884	0.36	0.79	65.88
1885	0.37	0.85	65.14
1886	0.40	0.90	63.12
1887	0.40	0.89	64.61
1888	0.38	0.78	69.32
1889	0.36	0.76	73.53
1890	0.36	0.73	73.23
1891	0.35	0.76	74.47
1892	0.33	0.69	81.69
1893	0.34	0.68	80.85
1894	0.36	0.72	77.16
1895	0.36	0.73	75.94
1896	0.32	0.66	82.22
1897	0.28	0.57	98.37
1898	0.33	0.69	79.38
1899	0.39	0.76	70.49
1900	0.31	0.64	84.81
1901	0.30	0.66	84.45
1902	0.34	0.72	83.04
1903	0.37	0.74	79.51
1904	0.38	0.76	77.39
1905	0.33	0.77	86.22
1906	0.34	0.77	87.99
1907	0.34	0.76	92.23
1908	0.30	0.71	103.89
1909	0.32	0.78	95.41
1910	0.34	0.84	91.87
1911	0.36	0.84	88.34
1912	0.30	0.80	93.99
1913	0.33	0.73	100.00
1914	0.31	0.72	100.35
1915	0.29	0.69	106.36
1916	0.34	0.76	102.47
1917	0.35	0.76	104.59

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Table 5: Real (1913 prices) daily wages for craftsmen and labourers and CPI for Japan, India, and Indonesia, 1800-2000

	India		
	labourer	Craftsman	CPI Index
	1913 Rupee	1913 Rupee	1913=100
1918	0.33	0.69	119.43
1919	0.27	0.61	165.72
1920	0.29	0.66	170.67
1921	0.31	0.74	168.20
1922	0.37	0.87	157.24
1923	0.42	0.99	142.76
1924	0.44	1.03	140.99
1925	0.44	1.06	147.70
1926	0.42	1.03	150.53
1927	0.46	1.14	145.58
1928	0.46	1.17	143.11
1929	0.49	1.21	137.81
1930	0.56	1.42	113.43
1931	0.55	1.45	98.59
1932	0.56	1.49	92.58
1933	0.56	1.56	86.57
1934	0.52	1.51	88.69
1935	0.44	1.78	93.64
1936	0.43	1.25	91.52
1937	0.39	1.22	93.29
1938	0.41	1.25	91.17
1939	0.38	1.16	96.47
1940	0.35	1.12	98.23
1941	0.35	0.99	111.31
1942	0.27	0.75	150.88
1943	0.23	0.51	265.72
1944	0.36	0.66	259.72
1945	0.43	0.77	260.42
1946	0.43	0.79	280.57
1947	0.47	0.44	330.44
1948	0.53	0.55	353.36
1949	0.47	0.70	363.96
1950	0.64	0.74	363.96
1951	0.67	0.72	378.09
1952	0.68	1.44	371.02
1953	0.73	0.93	381.63
1954	0.76	0.97	367.49
1955	0.69	1.12	348.15
1956	0.48	1.09	382.96
1957	0.41	1.10	402.31
1958	0.39	0.66	421.65
1959	0.34	0.64	440.99
1960	0.36	0.65	448.73
1961	0.34	0.68	477.68
1962	0.34	0.66	505.94
1963	0.33	0.64	526.47
1964	0.32	0.64	548.40
1965	0.33	0.66	584.73

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Table 5: Real (1913 prices) daily wages for craftsmen and labourers and CPI for Japan, India, and Indonesia, 1800-2000

	India		
	labourer	Craftsman	CPI Index
	1913 Rupee	1913 Rupee	1913=100
1966	0.33	0.64	643.06
1967	0.33	0.65	688.14
1968	0.31	0.60	735.86
1969	0.33	0.64	772.83
1970	0.31	0.61	810.17
1971	0.31	0.54	823.09
1972	0.29	0.66	882.06
1973	0.31	0.77	1,020.21
1974	0.24	0.60	1,316.70
1975	0.23	0.56	1,412.34
1976	0.25	0.62	1,259.82
1977	0.17	0.57	1,368.08
1978	0.24	0.57	1,395.69
1979	0.30	0.63	1,470.93
1980	0.32	0.57	1,659.55
1981	0.30	0.59	1,876.71
1982	0.29	0.55	2,008.43
1983	0.33	0.66	2,231.18
1984	0.31	0.62	2,367.04
1985	0.43	0.66	2,491.68
1986	0.60	0.77	2,674.46
1987	0.55	0.75	2,897.44
1988	0.54	0.81	3,194.17
1989	0.63	0.88	3,436.01
1990	0.59	0.82	3,682.75
1991	0.54	0.71	4,241.30
1992	0.48	0.66	4,826.86
1993	0.46	0.65	5,053.97
1994	0.71	0.76	5,580.60
1995	0.74	0.87	6,153.88
1996	0.77	0.85	6,702.61
1997	0.75	0.85	7,148.22
1998	0.73	0.83	7,949.84
1999	0.81	0.91	8,377.04
2000	0.81	0.91	8,658.15

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