Appendix 1

Nominal Wage, Cost of Living and Real Wage and Data for Burma 1870-1940, and Land Rent Data for Burma 1890-1923

Overview: Both wages and prices are based on urban observations from Mandalay and Rangoon.

APPENDIX TABLE 1.1: Nominal wage indices

Nominal Wages for Rangoon and Mandalay 1873-1916: Monthly wages for carpenters, masons, and blacksmiths in Rangoon (1873-1874, 1876-1912, 1916) and Mandalay (1887-1912, 1916), as reported by Prices and Wages in India. For years where wages are given not as a single value but as a range between a maximum and a minimum, we took the mean of the two values. The wage observation for Rangoon in 1875 was missing and was filled in by geometric interpolation. The 1911 and 1916 figures are daily rather than monthly wages, so we multiplied these figures by 25 in order to convert them to monthly wages (assuming a 25-day work month). Nominal wages for 1913-1915 were geometrically interpolated for both Rangoon and Mandalay. Wages in Foreign Countries reports a monthly wage observation for Rangoon laborers in 1922, but we did not use that information in calculating real wages.

Nominal Wages for Rangoon 1870-1872 and 1917-1940: We completed the wage series for Rangoon with information reported by Trends of Economic Growth and Income Distribution in Burma, 1870-1940, which presents a money wage index for every five years from 1870 to 1940. We filled in the intermediate years of this second series by geometric interpolation and used it to extend the Rangoon nominal wage series. When extending the Rangoon series backward (1870-1872), we used as the link year 1873, while when extending forward (above) from 1917 to 1940 we used as the link an average of 1914-1916.

Nominal Wages for All Burma 1870-1940: The All Burma nominal wage index consists of four segments. For the period 1887-1916, the index is a weighted average of Rangoon and Mandalay nominal wages. The weights for the All Burma index were based on population series constructed for Mandalay and Rangoon (see Appendix Table 1.4). The All Burma index data for the periods 1870-1886 and 1917-1940 was linked to the Rangoon series. In the first case, it was extended backward using as link the average of 1887-1891; in the second case, it was extended forward using as link the average of 1912-1916.

All the nominal wage series were indexed 1900 = 100.

APPENDIX TABLE 1.2: Grain prices and cost of living indices

Grain Prices for Rangoon and Mandalay 1873-1920: Rice and wheat prices are the components of grain price series presented here. These two cereals were eaten throughout Burma, and they were a very large share of the unskilled worker's budget. The price information on rice and wheat is available for both Rangoon (1873-1920) and urban Mandalay (1887-1920) in Prices and Wages in India. Since we could not find the prices for Rangoon wheat 1916-1918, we filled in this gap by interpolation, setting the incremental yearly price changes in Rangoon proportional to the incremental yearly price changes in Mandalay. Grain prices were constructed as a weighted average of rice and wheat prices. The weights were constructed using their relative shares represented in the typical unskilled Bombay worker's budget, as reported by the Report on an Enquiry into Working Class Family Budgets in Bombay City: p = 0.86(rice price) + 0.14(wheat price).

Grain Prices for Rangoon 1870-1872 and 1917-1940: The Rangoon grain price index was extended using information reported by Trends of Economic Growth and Income Distribution in Burma, 1870-1940. An index of paddy (rice) price is presented there for every five years 1870-1940. The intermediate years were

filled in by geometric interpolation. With the resulting paddy index series, we extended backward and forward the Rangoon grain price index, using the year 1920 as link.

Grain Prices for All Burma 1870-1940: The All Burma grain price index was constructed in a way similar to that of the All Burma nominal wage index. For 1887-1920, the index is a weighted average of the Rangoon and Mandalay grain price indices, where the weights are based on population information. The series was then extended backward (1870-1886) and forward (1921-1940) based on the behavior of the Rangoon series, using as links the average of the years 1887-1889 and 1920 respectively.

Cost of Living for All Burma 1870-1940: Grains, and rice in particular, composed a very large share of the unskilled urban worker's budget. However, we also incorporated information provided by Hlaing regarding price indices for Burmese consumer goods imports (much of which was textiles) after 1891. Imports included in his index are: foodstuffs, vegetable oil, sessamum, salt, soap, cotton yarns, grey, white and colored cotton piece goods, silk, and woolen piece goods. In Southeast Asia 1874-1937, the relative budget weights for rice and textiles were 86.45% and 13.55% respectively. We used these shares to construct our cost of living series for All Burma, using the All Burma grain price series and the textiles price series (proxied by import prices).

The All Burma cost of living index was constructed in two segments. We constructed an All Burma (weighted) cost of living series for 1891-1940, using Hlaing's consumer goods import price index and our grain price index. Hlaing also presents information on unit value of imports for 1871, 1881 and 1891. We filled in his series for 1872-1880 and 1882-1890 by geometric interpolation. With the resulting new unit value of imports series, we constructed an All Burma cost of living series for 1871-1891. We then linked the first cost of living index (1891-1940) with this second one (1871-1891), using the overlapping year 1891 as the link. Finally, we extended the series backward to the year 1870, based on the behavior of the Grain price index for All Burma and using the year 1871 as link.

All grain price and cost of living series were indexed 1900 = 100.

APPENDIX TABLE 1.3: Real wage indices

Real Wages 1870-1940: Real wages for Rangoon (1870-1940) and Mandalay (1887-1916) were calculated by dividing the indexed nominal wage series in each city by the All Burma indexed cost of living series. An All Burma real wage series was also calculated for 1870-1940 by dividing the All Burma nominal wage series by the All Burma cost of living index.

All real wages series were indexed 1900 = 100.

APPENDIX TABLE 1.4: Population weights for Rangoon and Mandalay

To construct All Burma (weighted) indices, we used weights based on population series constructed for Mandalay and Rangoon. Mandalay data for 1875 and 1900, and Rangoon data for 1800, 1900 and 1925 come from Chandler. Mandalay data for 1890, 1900, 1910, 1920, 1930 and 1940, and Rangoon data for 1870, 1880, 1890, 1900, 1910, 1920, 1930 and 1940 come from Mitchell. Where both Chandler and Mitchell give population data for a given year (i.e. Mandalay 1900 and Rangoon 1900), the actual population was taken as the mean of the two figures. In practice, the two authors tend to give highly consistent figures (e.g. both give 184,000 as the population of Mandalay in 1900; Chandler gives the population of Rangoon in 1900 as 229,000, while Mitchell gives it as 235,000). Population figures for all intermediate years were found by geometric interpolation.

APPENDIX TABLE 1.5: Nominal land rents

Land rents in lower Burma 1890-1923: This series reports average rent per acre in lower Burma, based on Annual Reports of the Land Revenue Administration in <u>The Rice Industry of Burma 1852-1940</u>, Table VI. 7, p. 162. The years 1891-1894 and 1896-1899 were filled in by geometric interpolation. Appendix Table 1.5 also reports the wage/rental ratio (1900=1.0), where the nominal wage is All Burma index from Appendix Table 1.1.

Works cited:

Bombay Labour Office. <u>Report on an Enquiry into Working Class Family Budgets in Bombay City</u>. Bombay: Government Central Press, 1935.

Chandler, Tertius. <u>Four Thousand Years of Urban Growth: An Historical Census</u>. Saint David's, Ontario: Saint Davids University Press, 1987.

Department of Statistics, Commercial Intelligence Department. <u>Prices and Wages in India</u>. Calcutta: Superintendent of Government Printing, 1923.

Hlaing, A., <u>Trends in Economic Growth and Income Distribution in Burma, 1870-1940</u>, Journal of Burma Research Society, vol. 47, pt 1(1964): 89-148.

Mitchell, B. R. <u>International Historical Statistics: Africa, Asia and Oceania, 1750-1988</u>. Second edition. New York: Stockton Press, 1995.

Siok-Hwa, C. <u>The Rice Industry of Burma 1852-1940</u>, Singapore: University of Malaya Press, 1968.

United States Bureau of Labor Statistics. <u>Wages in Foreign Countries</u>. Washington: US Government Printing Office, 1929.

Appendix Table 1.1

Nominal Wage Indices for Burma, 1870-1940, 1900=100

Year	Rangoon	Mandalay	All Burma	Year	Rangoon	Mandalay	All Burma
1870	93.9		89.6	1906	100.0	115.4	105.6
1871	94.1		89.7	1907	100.0	115.4	105.5
1872	94.3		89.9	1908	100.0	115.4	105.3
1873	94.4		90.1	1909	77.8	115.4	90.2
1874	100.0		95.4	1910	73.1	146.0	96.5
1875	100.0		95.4	1911	77.0	79.9	77.9
1876	100.0		95.4	1912	76.1	83.3	78.4
1877	83.3		79.5	1913	84.9	108.6	92.4
1878	83.3		79.5	1914	94.8	141.5	109.4
1879	83.3		79.5	1915	105.8	184.5	130.3
1880	66.7		63.6	1916	118.1	240.4	156.0
1881	66.7		63.6	1917	109.2		116.5
1882	66.7		63.6	1918	111.7		119.1
1883	66.7		63.6	1919	114.2		121.8
1884	66.7		63.6	1920	116.7		124.5
1885	66.7		63.6	1921	122.6		130.8
1886	66.7		63.6	1922	128.8		137.4
1887	66.7	86.5	77.3	1923	135.3		144.4
1888	66.7	57.7	61.9	1924	142.2		151.7
1889	66.7	61.5	64.0	1925	149.4		159.3
1890	83.3	69.2	76.1	1926	144.6		154.2
1891	83.3	57.7	70.4	1927	140.0		149.3
1892	83.3	69.2	76.3	1928	135.5		144.5
1893	61.1	84.6	72.7	1929	131.2		139.9
1894	61.1	88.5	74.4	1930	127.0		135.4
1895	61.1	96.2	77.8	1931	121.0		129.1
1896	100.0	84.6	92.8	1932	115.3		123.1
1897	100.0	84.6	92.9	1933	109.9		117.3
1898	100.0	84.6	93.0	1934	104.8		111.8
1899	100.0	96.2	98.3	1935	99.9		106.6
1900	100.0	100.0	100.0	1936	95.6		102.0
1901	100.0	115.4	106.6	1937	91.5		97.6
1902	100.0	100.0	100.0	1938	87.6		93.5
1903	100.0	115.4	106.2	1939	83.9		89.5
1904	100.0	96.2	98.5	1940	80.3		85.6
1905	100.0	115.4	105.8				

Appendix Table 1.2

Grain Price and Cost of Living Indices for Burma 1870-1940, 1900=100

Year	Rangoon: Grains	Mandalay: Grains	Burma: Grains	Burma: COL	Year	Rangoon: Grains	Mandalay: Grains	Burma: Grains	Burma: COL
1870	111.4		104.0		1906	102.1	99.1	101.0	102.7
1871	109.8		102.5	108.6	1907	95.5	108.8	100.2	102.4
1872	108.3		101.0	107.5	1908	125.7	130.7	127.4	126.3
1873	109.7		102.4	108.8	1909	130.1	112.0	124.1	123.1
1874	134.9		125.9	129.5	1910	138.2	102.5	126.7	125.7
1875	88.3		82.4	91.5	1911	158.8	123.8	147.7	144.5
1876	81.7		76.2	86.2	1912	181.5	148.0	170.9	164.7
1877	97.2		90.8	99.0	1913	153.7	111.1	140.3	138.1
1878	130.7		122.0	126.5	1914	148.6	101.1	133.7	132.8
1879	136.1		127.0	131.0	1915	150.3	114.7	139.2	137.8
1880	116.9		109.1	115.4	1916	136.1	112.1	128.7	128.9
1881	101.6		94.8	103.1	1917	113.0	96.1	107.8	113.7
1882	96.4		90.0	98.4	1918	130.9	100.5	121.6	127.7
1883	108.7		101.5	108.0	1919	185.0	165.7	179.1	185.9
1884	108.9		101.7	107.7	1920	218.4	202.5	213.6	223.4
1885	92.1		86.0	93.5	1921	233.0		227.9	236.3
1886	100.0		93.3	99.5	1922	248.6		243.1	243.1
1887	111.3	106.9	108.9	112.8	1923	265.3		259.4	255.3
1888	116.1	103.6	109.5	112.8	1924	283.1		276.8	270.8
1889	116.6	89.7	102.6	106.4	1925	302.0		295.3	286.5
1890	125.6	94.3	109.6	112.2	1926	287.8		281.4	272.1
1891	133.3	108.0	120.5	121.4	1927	274.3		268.2	258.1
1892	135.5	113.1	124.4	124.5	1928	261.4		255.6	246.2
1893	105.5	91.8	98.8	102.9	1929	249.1		243.6	238.2
1894	95.6	76.4	86.3	91.8	1930	237.4		232.1	223.8
1895	95.6	84.9	90.5	94.0	1931	209.8		205.2	197.1
1896	100.4	104.0	102.1	103.4	1932	185.5		181.4	173.6
1897	141.2	105.1	124.5	122.5	1933	164.0		160.4	154.1
1898	104.5	89.1	97.5	98.3	1934	145.0		141.8	137.0
1899	106.9	94.2	101.2	101.2	1935	128.2		125.3	122.7
1900	100.0	100.0	100.0	100.0	1936	135.9		132.9	129.6
1901	93.7	95.3	94.4	96.1	1937	144.0		140.8	136.9
1902	83.8	89.9	86.3	88.9	1938	152.7		149.3	145.2
1903	87.1	95.9	90.7	92.3	1939	161.9		158.3	152.6
1904	87.5	88.1	87.7	90.1	1940	171.6		167.8	160.9
1905	95.9	89.8	93.6	95.7					

Appendix Table 1.3

Real Wages Indices for Burma, 1870-1940, 1900=100

Year	Rangoon	Mandalay	All Burma	Year	Rangoon	Mandalay	All Burma
1870	85.2		81.2	1906	97.3	112.3	102.8
1871	86.6		82.6	1907	97.7	112.7	103.0
1872	87.7		83.7	1908	79.2	91.4	83.4
1873	86.8		82.8	1909	63.2	93.8	73.3
1874	77.2		73.7	1910	58.2	116.2	76.7
1875	109.3		104.3	1911	53.3	55.3	53.9
1876	115.9		110.6	1912	46.2	50.6	47.6
1877	84.1		80.3	1913	61.5	78.6	66.9
1878	65.9		62.8	1914	71.4	106.6	82.4
1879	63.6		60.7	1915	76.8	133.9	94.6
1880	57.7		55.1	1916	91.6	186.5	121.0
1881	64.7		61.7	1917	96.0		102.5
1882	67.8		64.6	1918	87.4		93.3
1883	61.7		58.9	1919	61.4		65.5
1884	61.9		59.1	1920	52.2		55.7
1885	71.3		68.0	1921	51.9		55.4
1886	67.0		63.9	1922	53.0		56.5
1887	59.1	76.7	68.6	1923	53.0		56.5
1888	59.1	51.1	54.9	1924	52.5		56.0
1889	62.7	57.8	60.1	1925	52.1		55.6
1890	74.3	61.7	67.9	1926	53.1		56.7
1891	68.7	47.5	58.0	1927	54.2		57.9
1892	66.9	55.6	61.3	1928	55.0		58.7
1893	59.4	82.2	70.6	1929	55.1		58.7
1894	66.6	96.4	81.0	1930	56.7		60.5
1895	65.0	102.3	82.8	1931	61.4		65.5
1896	96.7	81.9	89.7	1932	66.4		70.9
1897	81.6	69.0	75.8	1933	71.4		76.1
1898	101.7	86.1	94.6	1934	76.5		81.6
1899	98.8	95.0	97.1	1935	81.4		86.8
1900	100.0	100.0	100.0	1936	73.8		78.7
1901	104.0	120.0	110.9	1937	66.9		71.3
1902	112.5	112.5	112.5	1938	60.3		64.4
1903	108.4	125.1	115.1	1939	54.9		58.6
1904	111.0	106.7	109.3	1940	49.9		53.2
1905	104.5	120.6	110.6				

Appendix Table 1.4

Rangoon and Mandalay Weights, 1873-1920

Year	Rangoon	Mandalay	Year	Rangoon	Mandalay
1873	0.3498	0.6502	1897	0.5368	0.4632
1874	0.3576	0.6424	1898	0.5438	0.4562
1875	0.3654	0.6346	1899	0.5508	0.4492
1876	0.3734	0.6266	1900	0.5577	0.4423
1877	0.3814	0.6186	1901	0.5705	0.4295
1878	0.3894	0.6106	1902	0.5832	0.4168
1879	0.3976	0.6024	1903	0.5958	0.4042
1880	0.4057	0.5943	1904	0.6083	0.3917
1881	0.4138	0.5862	1905	0.6207	0.3793
1882	0.4219	0.5781	1906	0.6329	0.3671
1883	0.4300	0.5700	1907	0.6449	0.3551
1884	0.4382	0.5618	1908	0.6567	0.3433
1885	0.4464	0.5536	1909	0.6684	0.3316
1886	0.4546	0.5454	1910	0.6798	0.3202
1887	0.4629	0.5371	1911	0.6815	0.3185
1888	0.4712	0.5288	1912	0.6832	0.3168
1889	0.4795	0.5205	1913	0.6849	0.3151
1890	0.4878	0.5122	1914	0.6866	0.3134
1891	0.4948	0.5052	1915	0.6882	0.3118
1892	0.5018	0.4982	1916	0.6899	0.3101
1893	0.5088	0.4912	1917	0.6916	0.3084
1894	0.5159	0.4841	1918	0.6932	0.3068
1895	0.5229	0.4771	1919	0.6949	0.3051
1896	0.5299	0.4701	1920	0.6965	0.3035

Appendix Table 1.5

Rent Index for Lower Burma, 1890-1923 (1900=100)
Wage/Rental Ratio in Lower Burma, 1890-1923 (1900=1.0)

Year	Rent Index	Wage/Rent
1890	39.5	1.1508
1891	41.2	1.0198
1892	43.0	1.0596
1893	44.9	0.9667
1894	46.8	0.9481
1895	48.9	0.9510
1896	50.9	1.0890
1897	52.9	1.0474
1898	55.1	1.0074
1899	57.4	1.0229
1900	59.7	1.0000
1901	56.7	1.1225
1902	56.7	1.0530
1903	67.3	0.9420
1904	64.1	0.9174
1905	73.3	0.8626
1906	73.6	0.8568
1907	87.8	0.7169
1908	97.4	0.6456
1909	79.6	0.6767
1910	76.8	0.7502
1911	86.3	0.5391
1912	106.8	0.4383
1913	100.0	0.5517
1914	108.6	0.6019
1915	78.5	0.9907
1916	90.3	1.0311
1917	94.6	0.7358
1918	72.1	0.9867
1919	104.5	0.6955
1920	151.0	0.4923
1921	144.5	0.5402
1922	90.6	0.9053
1923	168.6	0.5111

**Nominal Wage, Cost of Living and Real Wage Data for India 1873-1939
and Land Prices for the Punjab 1871-1939**

APPENDIX TABLE 2.1: Nominal wage indices

*Nominal Wages 1873-1910***:** During this period, the Indian authorities collected an enormous amount of wage and price data, presented in Prices and Wages in India. The data we use here are the monthly wage quotes for carpenters, masons and blacksmiths in Calcutta, Dacca, Agra, Cawnpore, Delhi, Bombay, Ahmedabad, Secunderabad, Madras, and Bangalore.

There were gaps in the data for Agra and Cawnpore (1873, 1907-1910) and Madras (1908-1910). Some of the gaps were filled by linear interpolation. For each of the remaining gaps, data were interpolated by setting the incremental yearly wage changes proportional to the trends in a neighboring city for which data are available for the period of time in question. Since wages varied throughout each city, some sources occasionally presented a min-max range. Using discretion about the validity of the data, in such cases we used the average of the minimum and the maximum.

Although very little wage data can be found in most sources dealing with the early part of the period, we did come across one additional respected source that reported information over the period 1890-1912: K. L. Datta, Report on the Enquiry into the Rise of Prices in India. However, we elected to use Prices and Wages in India rather than Datta. First, it offers price and wage data for a longer period, both before and after Datta's series. Second, only Prices and Wages in India reports the information by city, the way in which the remainder of our data is reported.

*Nominal Wages 1911-1950***:** Additional sources were used to extend the series beyond 1910. The Report on the Royal Commission on Labour in India supplied additional data for Delhi, Agra and Madras, and Wages in Foreign Countries supplied additional data for Dacca. However, wage trends between 1910 and 1950 could be completely documented (without interpolating) for only three cities: Calcutta (Mukerji: 1960), Bombay (Mukerji: 1959) and Ahmedabad (Mukerji: 1961). For the rest of the series, we filled in the gaps by doing geometric interpolation. Thus, we interpolated gaps of Dacca (1912-1915), Agra (1911-1913, 1915, 1917-1918, 1929-1938), Cawnpore (1911-1915), Delhi (1911, 1915-1918, 1929-1938) and Madras (1912-1915, 1917-1918, 1929-1938). This allowed us to work with 6 series continuing up to 1950 (Calcutta, Agra, Delhi, Bombay, Ahmedabad and Madras), 2 series up to 1920 (Secundarabad and Bangalore) and 2 series up to 1916 (Dacca and Cawnpore).

We also calculated simple and weighted averages for All India 1873-1950, using in the latter population data as weights. All the nominal wage series were indexed 1900 = 100.

APPENDIX TABLE 2.2: Cost of living indices

*Cost of Living 1873-1939***:** We were unable to find comprehensive and consistent annual figures for consumer good prices other than for grains. Of course, expenditure on grains was a very large share of the worker's budget in India, and rice and/or wheat were eaten throughout the country. Another argument for the use of grain prices as the cost of living deflator is that retail and harvest prices for grains were extensively reported in Indian statistical documents. Rice and wheat are grown (and thus consumed) in different climates. This regional specialization is reflected in the official reports themselves: rice growing regions tended to have more complete data on rice prices, and wheat-growing regions tended to have more complete data on wheat prices. For example, since Ahmedabad was a major producer of wheat, there is much more information on historical prices in Ahmedabad for wheat than for rice. In contrast, Madras primarily grew rice, so it tends to have much more complete price data for rice than for wheat. In light of this fact, we elected to use region-specific cost of living deflators: for rice-specializing regions (Calcutta, Dacca, Secunderabad and Madras) we

used the price of rice as the deflator, and for wheat-specializing areas (Agra, Delhi, Bombay, and Ahmedabad) we used the price of wheat as the deflator. For Cawnpore and Bangalore, where both rice and wheat prices were given in detail, we used a weighted average of rice and wheat prices as the deflator. The weights were constructed from the typical unskilled Bombay worker's budget, as reported by the Report on an Enquiry into Working Class Family Budgets in Bombay City: p = .86(rice price) + .14(wheat price).

Price data up to 1916 are from Prices and Wages in India. Post-1916 data for Bombay and Calcutta are from Index Numbers of Indian Prices and Narain. Post-1916 data for Delhi are from the Report on the Royal Commission on Labour in India and Narain. Post-1916 data for Agra, Ahmedabad, Madras, Punjab and the United Provinces are from Narain. Only Secunderabad presented a gap in prices (1912-1915), which we interpolated geometrically.

Each region's cost of living series was indexed 1900 = 100

APPENDIX TABLE 2.3: Real wage indices

Real Wages 1873-1950: Each city's indexed nominal wage series was first deflated by its own indexed price series to create a city real wage index. An All India real wage index was then created in three parts. Between 1873 and 1916, the All India series is a weighted (by regional population) average of the real wage indices for all ten of the cities for which we had collected data. However, as noted above, we have information for only 8 cities after 1916 and for only 6 cities after 1920. In order to use the maximum of information which were at our disposal, we constructed an All India weighted index using the information of these 8 available cities for 1917-1920 (using as link the year 1916) and using the 6 remaining cities for 1921-1950 (using as link the year 1920).

In a similar fashion, real wage indices were also created for four separate geographical regions: North (Agra, Kanpur, Delhi), South (Bangalore, Madras, Secunderabad), East (Calcutta, Dacca) and West (Bombay, Ahmedabad). Regional real wage indices were found by taking the weighted average of the real wages for the cities within each region. If data were missing for one or more of the cities in a region during a given year, we took the weighted average of the remaining cities in that region (doing the corresponding links). Thus, as in the case of the All India index, each of the regional indices was made up of several linked series, each incorporating varying amounts of data.

The weights for the all-India index and the regional indices were based on population series constructed for the ten cities. Chandler provides population data for the following years:

Agra: 1846, 1850, 1852, 1900, 1925
Cawnpore: 1848, 1853, 1900
Delhi: 1846, 1850, 1853, 1900
Ahmedabad: 1846, 1851, 1872, 1900
Bombay: 1849, 1850, 1864, 1875, 1900, 1914
Calcutta: 1850, 1875, 1900, 1914
Dacca: 1850, 1867, 1900
Bangalore: 1850, 1852, 1900
Madras: 1850, 1863, 1875, 1900
Secunderabad: 1850

Mitchell provides population data for the following years:

Agra: 1858, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Cawnpore: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Delhi: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Ahmedabad: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Bombay: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Calcutta: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Dacca: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940

Bangalore: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940
Madras: 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940

The Census of India, 1931, provides population data for the following years:

Secunderabad: 1901, 1911, 1921, 1931 (1931 figure includes the town of Bolarum), 1961 (sum of the population figures for the Secunderabad Cantonment and the Secunderabad Division of greater Hyderabad).

Where both Chandler and Mitchell give population figures for a given year, the actual population was taken as the mean of the two figures. In practice, the two authors tend to give highly consistent figures (e.g. both give 197,000 as the population of Cawnpore in 1900; Chandler gives the population of Agra in 1900 as 186,000 while Mitchell gives it as 188,000). Population figures for all intermediate years were found by geometric interpolation.

All of these real wage series were indexed 1900 = 100.

APPENDIX TABLE 2.4: Land price index

Land Prices in Punjab 1862-1963: Mukerji reports two price series in Table 6 of "Land Prices in Punjab": one for the average price of all land (for every Census year from 1871 to 1961) and the other for the average price of "cultivated" land (for 1897 and every Census year from 1901 to 1961). Mukerji also gives the average price of all land in 1866 and 1862-63 (p. 533). Finally, Mukerji gives the average prices -- both for cultivated land and for all land -- during the periods 1899-1900, 1913-1914, 1938-1939, 1944-1945, 1947-1948 and 1962-1963 in his Table 1.

Even after combining these three groups of data, we still had many gaps in the land price series, which we filled using geometric interpolation. One complication was the fact that some of the prices were for individual years, while others were for two-year periods. For the purposes of interpolation, the prices for the one-year periods were treated as the price in the middle of the year, while prices for two-year periods were treated as the value at the end of the first year. For example, we treated the price given for the 1947-1948 period as the price on December 31, 1947, and the price given for the 1949 period as the price on June 31, 1949.

Mukerji also reports two-year moving averages for periods starting with 1915-1916 and ending with 1948-1949 (Appendix I), but we elected not to use it because these data were inconsistent with the data in the rest of his paper.

Appendix Table 2.4 reports the land price series indexed 1900=100, as well as the wage/rental ratio indexed 1900=1.00. Due to Delhi's proximity to Punjab, nominal wages in Delhi were used to calculate the wage to land price ratio.

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Appendix Table 2.1

Nominal Wage Indices for India, 1873-1939 (1900=100)

Year	Calcutta	Dacca	Agra	Cawnpore	Delhi	Bombay
1873	46.1	120.0	162.8	88.8	64.5	107.9
1874	57.9	140.0	162.8	88.8	64.5	104.3
1875	81.6	132.0	163.0	88.8	64.5	104.3
1876	81.8	92.0	138.9	88.8	77.4	104.3
1877	81.6	88.0	88.6	88.8	72.6	104.3
1878	63.2	100.0	83.3	88.8	77.4	104.3
1879	60.5	112.0	98.6	88.8	77.4	104.3
1880	63.2	112.0	95.4	88.8	72.6	104.3
1881	63.2	112.0	90.2	86.4	72.6	104.3
1882	63.2	112.0	94.4	103.6	38.7	121.8
1883	63.2	132.0	94.4	91.8	72.6	111.5
1884	63.2	112.0	94.4	91.8	72.6	111.6
1885	78.9	112.0	88.9	130.3	85.9	111.5
1886	78.9	112.0	77.8	118.4	85.9	111.5
1887	92.1	112.0	72.2	118.4	80.6	114.8
1888	78.9	112.0	72.2	118.4	83.5	116.1
1889	78.9	120.0	100.0	118.4	78.6	111.9
1890	78.9	112.0	83.3	118.4	78.6	100.1
1891	78.9	112.0	116.7	106.6	76.6	100.0
1892	78.9	112.0	116.7	99.9	78.6	100.0
1893	81.6	128.0	116.7	99.9	78.6	100.0
1894	81.6	88.0	122.2	99.9	80.6	100.0
1895	81.6	88.0	122.2	99.9	80.6	100.0
1896	81.6	88.0	100.0	99.9	82.3	100.0
1897	100.0	88.0	100.0	99.9	84.6	100.0
1898	100.0	100.0	100.0	99.9	84.6	100.0
1899	100.0	100.0	100.0	100.4	100.0	100.0
1900	100.0	100.0	100.0	100.0	100.0	100.0
1901	100.0	108.0	100.0	121.5	96.8	100.0
1902	105.3	110.0	100.0	122.3	129.0	100.0
1903	105.3	110.0	100.0	133.6	96.8	100.0
1904	105.3	120.0	100.0	133.6	109.7	100.0
1905	105.3	124.0	100.0	134.7	109.7	100.0
1906	78.9	128.0	72.2	91.1	116.1	91.7
1907	84.2	132.0	80.2	101.1	129.0	93.5
1908	88.8	168.0	80.2	101.1	129.0	92.1
1909	88.8	160.0	80.2	101.1	129.0	94.4
1910	88.8	160.0	80.2	101.1	129.0	94.4
1911	90.1	121.3	93.4	115.3	158.0	81.8
1912	86.8	121.9	108.8	131.4	193.5	86.2
1913	94.7	122.5	126.7	149.8	193.5	86.8

Appendix Table 2.1
(continued)
Nominal Wage Indices for India, 1873-1939 (1900=100)

Year	Ahmedabad	Secunderabad	Madras	Bangalore	Simple Average	Weighted Average
1873	98.5	61.8	100.4	95.0	94.6	103.1
1874	98.5	60.0	100.4	95.0	97.2	108.8
1875	112.5	60.0	98.2	95.0	100.0	109.8
1876	112.5	60.0	80.4	70.0	90.6	94.6
1877	112.5	60.0	80.4	95.0	87.2	89.9
1878	112.5	60.0	93.7	95.0	87.8	92.1
1879	112.5	60.0	80.4	95.0	88.9	96.0
1880	150.0	60.0	80.4	95.0	92.2	99.3
1881	112.5	60.0	97.1	95.0	89.3	95.5
1882	112.5	60.0	97.1	96.7	90.0	97.6
1883	125.0	60.0	97.1	96.7	94.4	103.9
1884	125.0	71.1	96.4	96.7	93.5	99.0
1885	125.0	71.1	97.1	96.7	99.7	105.5
1886	125.0	71.1	97.1	96.7	97.4	102.8
1887	125.0	95.6	87.1	96.7	99.4	103.4
1888	93.8	95.6	100.4	96.7	96.8	100.2
1889	93.8	95.6	101.2	112.0	101.0	106.0
1890	93.8	95.6	101.2	110.0	97.2	100.9
1891	93.8	95.6	102.4	120.0	100.2	103.7
1892	93.8	95.6	103.6	108.0	98.7	102.0
1893	93.8	95.6	103.6	120.5	101.8	107.5
1894	93.8	81.7	103.6	106.7	95.8	96.1
1895	93.8	95.6	103.6	86.7	95.2	94.8
1896	112.5	104.4	103.6	120.0	99.2	97.6
1897	112.5	104.4	103.6	80.0	97.3	95.6
1898	112.5	104.4	103.6	120.0	102.5	102.2
1899	101.3	104.4	103.6	120.0	103.0	102.2
1900	100.0	100.0	100.0	100.0	100.0	100.0
1901	70.0	89.3	103.6	100.0	98.9	101.5
1902	70.0	104.4	103.6	98.7	104.3	105.1
1903	93.8	100.0	103.6	100.0	104.3	106.7
1904	93.8	100.0	103.6	80.0	104.6	108.5
1905	93.8	100.0	103.6	80.0	105.1	109.7
1906	93.8	100.0	103.6	80.0	95.5	99.8
1907	93.8	100.0	103.6	80.0	99.7	104.5
1908	95.8	100.0	103.6	80.0	103.9	114.3
1909	93.8	100.0	103.6	80.0	103.1	112.2
1910	94.2	100.0	103.6	80.0	103.1	112.2
1911	94.2	100.0	145.0	80.0	107.9	108.4
1912	94.2	100.0	147.6	80.0	115.0	115.1
1913	94.2	100.0	150.3	80.0	119.9	120.4

Appendix Table 2.1
(continued)
Nominal Wage Indices for India, 1873-1939 (1900=100)

Year	Calcutta	Dacca	Agra	Cawnpore	Delhi	Bombay
1914	95.4	123.1	147.6	170.8	193.5	99.9
1915	96.1	123.8	147.6	194.8	220.8	102.3
1916	96.1	124.4	147.6	222.0	251.9	102.5
1917	97.4		173.5		287.5	103.9
1918	97.4		204.0		328.0	128.7
1919	107.9		239.8		374.2	151.1
1920	121.1		295.1		374.2	187.8
1921	130.9		313.6		374.2	187.1
1922	130.9		313.6		316.1	193.5
1923	128.9		295.1		309.7	200.0
1924	127.6		295.1		361.3	200.0
1925	130.3		276.7		361.3	200.0
1926	126.3		258.2		348.4	211.1
1927	127.0		258.2		341.9	211.1
1928	116.4		258.2		348.4	211.1
1929	108.6		254.5		323.7	211.1
1930	94.1		250.9		300.8	211.1
1931	106.6		247.3		279.5	211.1
1932	101.3		243.8		259.7	211.1
1933	96.1		240.3		241.4	211.1
1934	96.1		236.8		224.3	166.4
1935	96.1		233.4		208.4	166.4
1936	111.2		230.1		193.7	166.4
1937	120.4		226.8		179.9	173.7
1938	128.9		223.6		167.2	196.2
1939	128.9		220.4		155.4	216.0
1940	146.7		260.2		132.8	216.0
1941	140.8		231.5		175.7	233.2
1942	150.7		296.3		218.7	266.8
1943	195.4		380.6		261.8	376.7
1944	200.7		435.2		284.9	389.7
1945	215.8		445.4		292.5	385.1
1946	236.2		554.6		305.9	426.7
1947	275.7		577.8		319.4	540.5
1948	353.3		680.6		336.0	574.4
1949	440.1		820.4		476.3	588.2
1950	442.1		688.9		424.7	594.6

Appendix Table 2.1
(continued)
Nominal Wage Indices for India, 1873-1939 (1900=100)

Year	Ahmedabad	Secunderabad	Madras	Bangalore	Simple Average	Weighted Average
1914	94.2	100.0	153.0	80.0	125.7	126.9
1915	94.2	100.0	155.7	80.0	131.5	132.5
1916	94.2	100.0	158.5	120.0	141.7	142.0
1917	95.9	82.2	137.4	120.0	145.3	149.2
1918	123.9	82.2	119.1	120.0	159.3	167.2
1919	140.4	100.0	103.2	120.0	176.9	187.1
1920	159.4	100.0	157.5	146.7	204.1	217.4
1921	223.2		165.1		219.7	236.4
1922	228.1		172.7		213.5	231.2
1923	232.9		176.8		211.7	228.5
1924	234.1		180.9		220.4	236.2
1925	235.3		185.7		218.9	233.2
1926	236.6		189.8		215.9	229.4
1927	236.6		195.3		215.9	229.2
1928	236.6		192.5		214.8	228.2
1929	236.6		186.8		208.2	222.2
1930	236.6		181.2		200.8	215.5
1931	249.8		175.8		200.1	215.7
1932	249.8		170.6		194.8	210.8
1933	249.8		165.5		189.7	206.2
1934	249.8		160.6		178.7	194.5
1935	234.2		155.8		172.4	187.9
1936	234.2		151.2		171.2	186.9
1937	216.7		146.7		167.7	183.0
1938	230.9		142.3		171.6	188.2
1939	245.0		138.1		173.9	191.9
1940	258.1		146.4		182.8	203.6
1941	316.5		147.6		196.2	217.5
1942	489.7		162.5		249.7	281.8
1943	723.0		181.0		333.8	382.0
1944	741.7		248.8		362.5	410.9
1945	649.7		248.2		352.4	397.0
1946	657.1		291.1		389.4	439.3
1947	708.3		335.1		434.4	487.4
1948	913.6		534.5		534.5	591.5
1949	902.9		451.8		579.8	647.0
1950	927.5		354.8		540.9	607.6

Appendix Table 2.2

Cost of Living Indices for India, 1873-1939 (1900=100)

Year	Calcut.	Dacca	Agra	Cawnp.	Delhi	Bombay	Ahmed.	Secund.	Madras	Bangal.
1873	91.1	59.1	68.6	70.4	59.6	52.1	67.0	67.5	55.6	68.6
1874	93.0	111.4	67.4	72.5	58.8	49.0	62.8	75.7	69.2	69.4
1875	77.4	77.7	53.8	59.3	52.9	51.0	55.1	74.5	59.5	60.4
1876	89.8	73.0	44.3	69.1	45.8	52.1	57.8	74.5	79.1	86.6
1877	93.5	90.2	62.8	78.1	61.4	73.8	95.0	140.0	104.9	120.3
1878	105.1	118.6	81.4	110.7	80.4	92.1	117.3	140.0	105.7	113.9
1879	106.1	116.7	80.7	86.6	80.4	87.4	118.5	94.3	81.7	87.4
1880	77.1	106.4	66.8	67.9	64.8	67.9	65.9	92.4	67.3	78.0
1881	65.7	59.6	62.4	63.7	58.5	55.1	57.2	91.5	58.2	72.7
1882	68.9	58.8	64.0	62.9	61.0	58.4	66.5	94.3	56.4	74.0
1883	69.8	60.6	65.1	68.9	59.7	58.9	73.8	89.7	55.6	75.5
1884	93.8	93.1	59.3	75.4	56.6	54.0	63.4	84.7	57.9	76.5
1885	110.9	84.6	54.9	66.7	50.4	53.2	56.3	77.5	67.6	85.5
1886	77.5	81.5	65.3	67.1	59.4	58.4	62.1	83.8	60.9	84.5
1887	61.5	71.0	77.6	70.3	77.0	61.0	84.5	83.1	62.8	77.0
1888	66.4	69.5	77.8	75.7	76.8	63.1	87.4	87.4	65.1	73.8
1889	82.0	97.6	73.6	80.6	65.5	61.1	79.8	92.2	66.3	80.8
1890	81.8	94.3	74.9	78.1	69.4	57.8	74.9	90.1	75.5	85.2
1891	82.5	88.0	83.3	81.6	80.7	62.5	81.6	88.4	80.9	96.1
1892	101.2	110.2	81.9	85.2	78.4	71.9	89.1	113.4	91.5	111.7
1893	110.5	133.9	75.3	80.4	68.2	62.0	71.4	102.3	83.2	103.4
1894	109.2	118.8	67.5	77.0	55.5	55.3	63.2	91.0	74.2	94.5
1895	90.8	81.8	74.2	78.4	65.7	46.0	71.4	106.4	76.7	87.1
1896	100.7	120.9	99.6	93.4	95.9	51.2	92.4	148.1	79.0	90.2
1897	144.4	142.8	115.9	115.5	114.3	91.0	125.5	144.8	86.4	117.8
1898	107.1	103.8	75.9	89.2	78.9	79.6	88.6	90.9	94.7	111.6
1899	93.1	76.5	77.0	82.6	77.6	78.8	89.5	106.4	70.5	81.7
1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1901	117.6	133.7	93.9	94.6	85.1	90.7	82.2	96.3	104.7	100.0
1902	112.1	113.8	80.2	89.8	74.8	82.2	77.6	80.8	90.6	88.2
1903	116.7	97.5	76.6	85.6	74.2	74.6	63.0	71.2	81.3	87.0
1904	117.5	89.8	71.1	80.8	71.4	72.9	64.2	71.2	82.6	75.4
1905	129.8	107.3	92.1	87.1	87.5	72.7	80.8	95.7	104.2	83.5
1906	139.8	169.0	97.1	104.7	89.7	64.2	89.3	116.8	110.3	104.3
1907	168.2	169.9	103.9	121.6	101.1	64.5	96.3	124.2	118.3	105.2
1908	174.0	167.0	143.2	140.0	136.9	92.1	109.1	135.9	125.1	124.9
1909	142.2	144.4	128.9	119.1	121.2	88.1	104.1	107.3	121.0	119.4
1910	134.9	129.2	100.7	109.6	96.7	89.1	91.4	114.3	114.1	110.1
1911	129.3	136.5	90.9	109.3	88.9	77.5	94.3	128.2	105.1	114.1
1912	147.7	150.5	95.9	111.8	99.3	88.5	95.0	122.9	119.3	134.8
1913	170.7	186.5	105.0	125.9	109.1	85.6	93.3	117.9	121.0	150.7

Appendix Table 2.2
(continued)
Cost of Living Indices for India, 1873-1939 (1900=100)

Year	Calcut.	Dacca	Agra	Cawnp.	Delhi	Bombay	Ahmed.	Secund.	Madras	Bangal.
1914	178.8	206.4	124.1	131.5	124.4	89.0	110.6	113.1	119.8	148.5
1915	179.1	205.8	146.5	139.4	142.7	109.8	125.3	108.5	112.9	134.4
1916	184.8	182.0	128.0	146.5	120.9	85.7	113.6	104.1	121.9	129.7
1917	159.7	177.8	134.7	137.4	124.9	90.8	120.9		120.3	132.8
1918	142.9	155.1	165.6	159.5	159.8	139.6	172.8		142.1	149.7
1919	207.4	274.7	197.8	203.5	195.0	149.6	209.8		195.2	200.3
1920	237.2	269.8	183.4	231.9	170.9	137.7	175.8		188.6	226.9
1921	237.2		213.3		227.3	155.4	191.3		157.3	
1922	217.5		194.9		182.9	136.7	168.3		154.7	
1923	203.4		141.4		122.3	108.4	133.4		142.9	
1924	234.4		143.5		136.3	123.8	152.4		158.9	
1925	257.6		179.3		176.0	130.7	160.9		168.9	
1926	264.3		172.2		166.5	127.9	157.5		156.9	
1927	273.8		155.3		150.0	129.3	159.2		163.5	
1928	267.1		163.9		155.7	108.7	133.9		164.3	
1929	230.1		163.9		160.2	109.2	134.5		152.1	
1930	210.8		105.0		93.1	88.1	108.5		132.1	
1931	144.6		77.5		64.1	62.3	76.6		96.9	
1932	115.1		97.0		85.9	65.3	80.4		90.9	
1933	109.8		91.1		91.6	65.2	80.2		74.2	
1934	127.4		81.4		73.7	63.5	78.3		70.8	
1935	128.8		88.5		80.5	63.8	78.5		84.3	
1936	139.4		92.3		88.9	65.2	80.2		82.1	
1937	134.1		108.9		111.0	79.1	97.3		81.3	
1938	132.3		116.0		110.4	70.0	86.1		84.3	
1939	144.3		96.7		87.1	65.2	80.2		88.1	

Appendix Table 2.3

Real Wages Indices for India, 1873-1939 (1900=100)

Year	Calcutta		Dacca		Agra		Cawnpore		Delhi	
	index	weight	index	weight	index	weight	index	weight	index	weight
1873	50.6	0.2683	203.1	0.0274	237.3	0.0580	126.1	0.0498	108.2	0.0608
1874	62.2	0.2623	125.7	0.0276	241.7	0.0581	122.5	0.0506	109.7	0.0612
1875	105.4	0.2563	169.9	0.0278	302.9	0.0582	149.7	0.0514	121.9	0.0615
1876	91.1	0.2588	126.0	0.0278	313.3	0.0578	128.5	0.0517	169.1	0.0613
1877	87.3	0.2612	97.6	0.0278	141.0	0.0573	113.7	0.0520	118.3	0.0612
1878	60.1	0.2637	84.3	0.0277	102.3	0.0569	80.2	0.0523	96.3	0.0610
1879	57.1	0.2661	96.0	0.0277	122.1	0.0565	102.6	0.0526	96.3	0.0608
1880	81.9	0.2686	105.2	0.0277	142.9	0.0560	130.9	0.0529	112.0	0.0606
1881	96.2	0.2698	187.9	0.0275	144.6	0.0558	135.8	0.0536	124.1	0.0607
1882	91.6	0.2710	190.6	0.0273	147.5	0.0556	164.7	0.0543	63.5	0.0608
1883	90.5	0.2722	217.9	0.0272	145.1	0.0554	133.3	0.0550	121.5	0.0608
1884	67.3	0.2734	120.3	0.0270	159.2	0.0551	121.7	0.0557	128.2	0.0609
1885	71.2	0.2746	132.4	0.0269	161.9	0.0549	195.2	0.0564	170.5	0.0610
1886	101.9	0.2757	137.5	0.0267	119.1	0.0547	176.4	0.0571	144.6	0.0611
1887	149.7	0.2769	157.7	0.0265	93.1	0.0544	168.5	0.0578	104.7	0.0611
1888	118.9	0.2781	161.2	0.0264	92.9	0.0542	156.5	0.0586	108.7	0.0612
1889	96.3	0.2792	122.9	0.0262	135.9	0.0540	146.9	0.0593	120.0	0.0613
1890	96.5	0.2842	118.8	0.0264	111.2	0.0545	151.7	0.0609	113.4	0.0622
1891	95.7	0.2870	127.2	0.0266	140.1	0.0544	130.5	0.0604	94.9	0.0619
1892	78.0	0.2898	101.7	0.0267	142.5	0.0543	117.3	0.0600	100.4	0.0616
1893	73.8	0.2927	95.6	0.0268	155.0	0.0542	124.3	0.0595	115.3	0.0614
1894	74.7	0.2955	74.1	0.0269	181.0	0.0540	129.7	0.0590	145.3	0.0611
1895	89.9	0.2983	107.6	0.0271	164.6	0.0539	127.3	0.0585	122.8	0.0608
1896	81.0	0.3011	72.8	0.0272	100.4	0.0538	107.0	0.0581	85.8	0.0605
1897	69.3	0.3039	61.6	0.0273	86.3	0.0537	86.5	0.0576	74.0	0.0602
1898	93.4	0.3068	96.4	0.0274	131.8	0.0536	112.0	0.0571	107.3	0.0599
1899	107.4	0.3096	130.7	0.0275	129.9	0.0534	121.4	0.0566	128.9	0.0596
1900	100.0	0.3124	100.0	0.0277	100.0	0.0533	100.0	0.0562	100.0	0.0593
1901	85.0	0.3130	80.8	0.0281	106.5	0.0528	128.5	0.0551	113.7	0.0594
1902	93.9	0.3135	96.7	0.0286	124.7	0.0522	136.1	0.0541	172.4	0.0596
1903	90.2	0.3140	112.8	0.0291	130.6	0.0517	156.0	0.0531	130.3	0.0597
1904	89.6	0.3144	133.6	0.0296	140.6	0.0511	165.3	0.0521	153.6	0.0598
1905	81.1	0.3147	115.5	0.0301	108.5	0.0506	154.7	0.0511	125.3	0.0599
1906	56.5	0.3150	75.7	0.0306	74.4	0.0500	87.0	0.0501	129.4	0.0600
1907	50.1	0.3152	77.7	0.0310	77.2	0.0495	83.2	0.0491	127.7	0.0600
1908	51.0	0.3154	100.6	0.0315	56.0	0.0489	72.2	0.0481	94.3	0.0601
1909	62.5	0.3155	110.8	0.0320	62.2	0.0483	84.9	0.0472	106.5	0.0601
1910	65.9	0.3155	123.8	0.0325	79.6	0.0478	92.2	0.0462	133.5	0.0602
1911	69.7	0.3187	88.8	0.0321	102.8	0.0467	105.5	0.0460	177.8	0.0603
1912	58.8	0.3221	81.0	0.0316	113.4	0.0456	117.5	0.0458	194.9	0.0605
1913	55.5	0.3255	65.7	0.0311	120.6	0.0446	119.0	0.0455	177.5	0.0607

Year	Bombay		Ahmedabad		Secunderabad		Madras		Bangalore	
	index	weight	index	weight	index	weight	index	weight	index	weight
1873	207.3	0.2619	147.0	0.0450	91.6	0.0207	180.6	0.1521	138.4	0.0559
1874	213.1	0.2663	156.8	0.0453	79.2	0.0210	145.0	0.1515	136.8	0.0561
1875	204.5	0.2707	204.1	0.0456	80.5	0.0214	165.1	0.1508	157.4	0.0563
1876	200.4	0.2707	194.6	0.0454	80.5	0.0215	101.6	0.1490	80.8	0.0560
1877	141.3	0.2707	118.5	0.0453	42.9	0.0216	76.6	0.1473	79.0	0.0556
1878	113.3	0.2707	95.9	0.0451	42.9	0.0217	88.6	0.1456	83.4	0.0553
1879	119.3	0.2707	94.9	0.0450	63.6	0.0219	98.3	0.1439	108.6	0.0550
1880	153.7	0.2707	227.5	0.0448	64.9	0.0220	119.4	0.1422	121.8	0.0546
1881	189.2	0.2681	196.8	0.0450	65.6	0.0222	166.8	0.1424	130.7	0.0549
1882	208.4	0.2656	169.3	0.0453	63.6	0.0225	172.2	0.1426	130.6	0.0552
1883	189.3	0.2631	169.4	0.0455	66.9	0.0227	174.4	0.1428	128.0	0.0554
1884	206.6	0.2605	197.1	0.0457	84.0	0.0230	166.5	0.1430	126.3	0.0557
1885	209.4	0.2580	221.9	0.0459	91.7	0.0232	143.6	0.1432	113.0	0.0559
1886	191.0	0.2555	201.3	0.0462	84.9	0.0235	159.3	0.1433	114.4	0.0562
1887	188.1	0.2531	147.9	0.0464	115.0	0.0237	138.7	0.1435	125.6	0.0565
1888	183.9	0.2506	107.3	0.0466	109.3	0.0240	154.3	0.1437	131.0	0.0567
1889	183.1	0.2481	117.5	0.0468	103.6	0.0242	152.7	0.1438	138.7	0.0570
1890	173.4	0.2353	125.1	0.0477	106.0	0.0248	134.0	0.1460	129.1	0.0580
1891	160.1	0.2340	114.9	0.0482	108.1	0.0250	126.6	0.1459	124.8	0.0566
1892	139.1	0.2326	105.3	0.0486	84.3	0.0252	113.2	0.1458	96.7	0.0553
1893	161.4	0.2313	131.2	0.0491	93.4	0.0255	124.5	0.1457	116.6	0.0540
1894	180.7	0.2300	148.4	0.0495	89.8	0.0257	139.6	0.1455	112.8	0.0527
1895	217.5	0.2286	131.3	0.0500	89.8	0.0259	135.0	0.1454	99.6	0.0515
1896	195.4	0.2273	121.8	0.0505	70.5	0.0261	131.1	0.1452	133.1	0.0503
1897	109.9	0.2259	89.6	0.0509	72.1	0.0263	119.8	0.1451	67.9	0.0491
1898	125.6	0.2245	126.9	0.0514	115.0	0.0265	109.3	0.1449	107.5	0.0479
1899	126.9	0.2232	113.1	0.0518	98.1	0.0267	146.9	0.1447	146.8	0.0467
1900	100.0	0.2218	100.0	0.0523	100.0	0.0269	100.0	0.1445	100.0	0.0456
1901	110.2	0.2249	85.2	0.0527	92.8	0.0272	98.9	0.1436	100.0	0.0432
1902	121.6	0.2280	90.2	0.0531	129.3	0.0274	114.3	0.1426	111.8	0.0408
1903	134.0	0.2311	148.8	0.0535	140.4	0.0276	127.3	0.1416	115.0	0.0386
1904	137.1	0.2342	146.1	0.0539	140.4	0.0278	125.5	0.1405	106.1	0.0366
1905	137.5	0.2373	116.0	0.0543	104.4	0.0280	99.4	0.1395	95.8	0.0346
1906	142.9	0.2404	104.9	0.0546	85.6	0.0282	93.9	0.1384	76.7	0.0327
1907	144.9	0.2435	97.3	0.0550	80.5	0.0283	87.6	0.1374	76.0	0.0309
1908	100.0	0.2466	87.8	0.0554	73.6	0.0285	82.8	0.1363	64.1	0.0292
1909	107.2	0.2497	90.1	0.0557	93.2	0.0287	85.6	0.1351	67.0	0.0276
1910	106.0	0.2528	103.0	0.0560	87.5	0.0288	90.7	0.1340	72.7	0.0261
1911	105.6	0.2529	99.9	0.0560	78.0	0.0286	138.0	0.1310	70.1	0.0277
1912	97.4	0.2532	99.1	0.0560	81.3	0.0275	123.7	0.1282	59.4	0.0295
1913	101.4	0.2535	100.9	0.0560	84.8	0.0264	124.2	0.1254	53.1	0.0314

Appendix Table 2.3
(continued)
Real Wages Indices for India, 1873-1939 (1900=100)

Year	Weighted average	North	South	East	West
1873	143.8	157.9	162.2	64.7	198.5
1874	141.9	158.7	136.9	68.3	204.9
1875	164.7	191.8	155.3	111.7	204.4
1876	146.7	205.6	94.5	94.5	199.5
1877	107.0	124.5	73.9	88.3	138.0
1878	87.5	93.4	82.9	62.4	110.8
1879	94.0	106.8	97.4	60.7	115.8
1880	123.5	128.1	114.5	84.1	164.2
1881	146.0	134.5	147.5	104.7	190.3
1882	147.2	123.1	150.7	100.7	202.7
1883	144.3	132.9	151.7	102.0	186.4
1884	140.6	136.0	147.8	72.1	205.2
1885	146.6	175.8	130.5	76.7	211.3
1886	146.5	147.0	140.2	105.1	192.6
1887	151.0	122.4	132.9	150.4	181.9
1888	141.5	119.8	143.6	122.6	171.9
1889	136.8	134.1	143.9	98.5	172.6
1890	129.3	125.8	129.7	98.4	165.2
1891	123.5	121.0	124.1	98.4	152.4
1892	107.7	119.1	106.0	80.0	133.3
1893	117.6	130.6	119.1	75.6	156.1
1894	127.9	151.1	127.6	74.6	175.0
1895	136.9	137.3	121.6	91.3	202.0
1896	121.3	97.5	124.4	80.3	182.0
1897	88.8	82.0	102.6	68.6	106.2
1898	109.9	116.6	109.6	93.6	125.8
1899	123.3	126.7	140.9	109.3	124.3
1900	100.0	100.0	100.0	100.0	100.0
1901	98.7	116.3	98.4	84.7	105.5
1902	113.3	145.6	115.8	94.1	115.7
1903	119.7	138.7	126.8	92.1	136.8
1904	122.5	153.3	124.0	93.4	138.8
1905	108.9	129.4	99.5	84.1	133.5
1906	94.0	98.9	89.9	58.2	135.9
1907	91.1	98.1	84.7	52.6	136.1
1908	75.9	75.6	78.6	55.6	97.8
1909	84.5	86.2	84.1	66.9	104.1
1910	90.0	104.4	87.7	71.3	105.4
1911	100.0	133.2	118.8	71.4	104.6
1912	93.9	147.1	107.2	60.8	97.7
1913	92.5	143.0	106.3	56.4	101.3

Appendix Table 2.3
(continued)
Real Wages Indices for India, 1873-1939 (1900=100)

Year	Calcutta		Dacca		Agra		Cawnpore		Delhi	
	index	weight	index	weight	index	weight	index	weight	index	weight
1914	53.4	0.3288	59.6	0.0307	118.9	0.0435	129.9	0.0453	155.6	0.0609
1915	53.6	0.3234	60.1	0.0307	100.7	0.0432	139.7	0.0458	154.7	0.0620
1916	52.0	0.3180	68.3	0.0308	115.3	0.0429	151.6	0.0463	208.3	0.0632
1917	61.0	0.3126		0.0308	128.8	0.0426		0.0468	230.1	0.0644
1918	68.1	0.3072		0.0308	123.2	0.0422		0.0473	205.2	0.0655
1919	52.0	0.3017		0.0308	121.2	0.0419		0.0477	191.9	0.0667
1920	51.0	0.2962		0.0308	160.9	0.0415		0.0482	218.9	0.0678
1921	55.2	0.2955		0.0309	147.0	0.0419		0.0482	164.6	0.0699
1922	60.2	0.2945		0.0310	160.8	0.0423		0.0482	172.9	0.0720
1923	63.4	0.2934		0.0311	208.7	0.0426		0.0482	253.2	0.0741
1924	54.5	0.2923		0.0312	205.7	0.0430		0.0482	265.0	0.0763
1925	50.6	0.2912		0.0313	154.3	0.0434		0.0482	205.3	0.0786
1926	47.8	0.2911		0.0314	150.0	0.0437		0.0481	209.3	0.0803
1927	46.4	0.2910		0.0315	166.3	0.0440		0.0480	227.9	0.0820
1928	43.6	0.2909		0.0315	157.6	0.0443		0.0479	223.7	0.0838
1929	47.2	0.2907		0.0316	155.3	0.0447		0.0478	202.1	0.0856
1930	44.6	0.2905		0.0317	238.9	0.0450		0.0477	323.2	0.0874
1931	73.7	0.2934		0.0318	319.1	0.0443		0.0493	435.8	0.0874
1932	88.0	0.2962		0.0319	251.2	0.0437		0.0510	302.3	0.0874
1933	87.5	0.2990		0.0320	263.7	0.0430		0.0527	263.6	0.0873
1934	75.4	0.3017		0.0321	291.1	0.0424		0.0545	304.4	0.0873
1935	74.6	0.3044		0.0322	263.9	0.0417		0.0563	258.8	0.0872
1936	79.8	0.3071		0.0323	249.3	0.0411		0.0582	217.8	0.0871
1937	89.8	0.3296		0.0311	208.3	0.0388		0.0577	162.2	0.0835
1938	97.5	0.3529		0.0298	192.8	0.0366		0.0570	151.5	0.0798
1939	89.4	0.3769		0.0286	227.8	0.0344		0.0562	178.4	0.0761

Appendix Table 2.3
(continued)
Real Wages Indices for India, 1873-1939 (1900=100)

Year	Bombay		Ahmedabad		Secunderabad		Madras		Bangalore	
	index	weight	index	weight	index	weight	index	weight	index	weight
1914	112.3	0.2536	85.2	0.0559	88.4	0.0253	127.7	0.1226	53.9	0.0334
1915	93.2	0.2553	75.1	0.0568	92.2	0.0246	137.9	0.1219	59.5	0.0361
1916	119.6	0.2569	82.9	0.0577	96.1	0.0240	130.1	0.1211	92.5	0.0391
1917	114.3	0.2584	79.3	0.0586		0.0234	114.2	0.1203	90.4	0.0422
1918	92.2	0.2598	71.7	0.0594		0.0228	83.8	0.1194	80.1	0.0456
1919	101.0	0.2611	66.9	0.0603		0.0222	52.9	0.1185	59.9	0.0492
1920	136.4	0.2623	90.7	0.0611		0.0216	83.5	0.1175	64.6	0.0531
1921	120.4	0.2590	116.7	0.0612		0.0210	104.9	0.1186		0.0538
1922	141.6	0.2555	135.5	0.0613		0.0212	111.6	0.1195		0.0545
1923	184.5	0.2520	174.5	0.0613		0.0215	123.7	0.1205		0.0552
1924	161.5	0.2486	153.5	0.0614		0.0217	113.8	0.1214		0.0559
1925	153.1	0.2451	146.3	0.0614		0.0219	110.0	0.1223		0.0565
1926	165.0	0.2414	150.2	0.0614		0.0222	121.0	0.1232		0.0572
1927	163.2	0.2378	148.6	0.0614		0.0224	119.4	0.1240		0.0579
1928	194.1	0.2342	176.7	0.0614		0.0226	117.2	0.1249		0.0585
1929	193.2	0.2306	175.9	0.0614		0.0228	122.8	0.1257		0.0592
1930	239.4	0.2270	218.0	0.0614		0.0231	137.2	0.1265		0.0598
1931	339.0	0.2241	326.0	0.0631		0.0228	181.4	0.1243		0.0594
1932	323.0	0.2212	310.6	0.0649		0.0226	187.6	0.1222		0.0590
1933	323.9	0.2183	311.4	0.0667		0.0224	223.2	0.1201		0.0585
1934	262.3	0.2153	318.9	0.0685		0.0221	227.0	0.1179		0.0581
1935	260.9	0.2124	298.2	0.0704		0.0219	184.7	0.1158		0.0576
1936	255.4	0.2094	291.9	0.0723		0.0217	184.0	0.1137		0.0572
1937	219.7	0.2059	222.6	0.0712		0.0206	180.3	0.1072		0.0544
1938	280.4	0.2019	268.0	0.0700		0.0195	168.7	0.1007		0.0517
1939	331.5	0.1974	305.4	0.0686		0.0184	156.7	0.0944		0.0489

Appendix Table 2.3
(continued)
Real Wages Indices for India, 1873-1939 (1900=100)

Year	Weighted average	North	South	East	West
1914	92.8	137.1	108.6	53.9	107.4
1915	88.8	134.7	116.2	54.2	89.9
1916	100.9	164.9	117.7	53.4	112.8
1917	113.8	183.3	105.1	62.7	107.9
1918	101.7	167.2	80.6	70.0	88.4
1919	91.4	159.0	53.5	53.5	94.6
1920	113.8	190.2	75.6	52.4	127.7
1921	97.9	152.6	97.6	56.7	119.7
1922	109.7	162.7	103.8	61.9	140.4
1923	137.1	228.9	115.0	65.2	182.6
1924	125.7	235.3	105.8	56.0	160.0
1925	113.2	180.8	102.2	52.0	151.7
1926	117.7	182.0	112.5	49.1	162.0
1927	119.0	199.3	111.0	47.7	160.2
1928	127.4	194.0	108.9	44.8	190.5
1929	126.8	179.7	114.2	48.5	189.6
1930	159.9	284.5	127.5	45.9	234.9
1931	225.5	383.0	168.6	75.7	336.2
1932	208.3	275.6	174.4	90.5	320.2
1933	209.5	254.6	207.5	89.9	321.0
1934	195.7	289.8	211.0	77.5	275.9
1935	181.1	251.6	171.8	76.6	270.2
1936	175.7	220.2	171.1	82.0	264.7
1937	153.9	170.8	167.7	92.3	220.5
1938	169.5	158.9	156.9	100.2	277.2
1939	180.2	187.2	145.7	91.9	324.7

Appendix Table 2.4

Land Price Index for Punjab, 1862-1963 (1900=100)
Wage to Land Price Ratio for Punjab, 1873-1950 (1900=1.00)

Year	Land Price	Wage/Land Price	Year	Land Price	Wage/Land Price
1862-1863	17.1		1912	219.5	0.5879
1864	18.5		1913-1914	304.9	0.5183
1865	19.9		1915	319.5	0.6059
1866	21.4		1916	334.7	0.5783
1867	22.9		1917	350.7	0.5520
1868	24.5		1918	367.4	0.6011
1869	26.2		1919	384.9	0.6546
1870	28.0		1920	403.2	0.7129
1871	30.0		1921	422.5	0.7763
1872	31.1		1922	430.9	0.8685
1873	32.2	2.0024	1923	439.4	0.8515
1874	33.4	1.9322	1924	448.2	0.8350
1875	34.6	1.8645	1925	457.1	0.6917
1876	35.9	2.1590	1926	466.1	0.6643
1877	37.2	1.9532	1927	475.4	0.7600
1878	38.5	2.0104	1928	484.8	0.7452
1879	39.9	1.9399	1929	494.5	0.7046
1880	41.4	1.7550	1930	504.3	0.6780
1881	42.9	1.6935	1931	514.3	0.6774
1882	44.7	0.8660	1932	519.6	0.6231
1883	46.6	1.5568	1933	524.9	0.5731
1884	48.6	1.4927	1934	530.3	0.5272
1885	50.7	1.6933	1935	535.7	0.4849
1886	52.9	1.6236	1936	541.2	0.4460
1887	55.2	1.4620	1937	546.7	0.4102
1888	57.5	1.4511	1938-1939	552.3	0.3773
1889-1890	60.0	1.3107	1940	542.4	0.3570

Appendix Table 2.4
(continued)
Land Price Index for Punjab, 1862-1963 (1900=100)
Wage to Land Price Ratio for Punjab, 1873-1950 (1900=1.00)

Year	Land Price	Wage/Land Price	Year	Land Price	Wage/Land Price
1891	70.7	1.1121	1941	532.7	0.3378
1892	74.4	1.0300	1942	740.8	0.2257
1893	78.2	1.0061	1943	1030.2	0.1508
1894	82.2	0.9569	1944-1945	1432.7	0.0927
1895	86.4	0.9333	1946	1669.7	0.1053
1896	90.8	0.8877	1947-1948	1945.8	0.1124
1897	95.5	0.8612	1949	1611.7	0.1625
1898	97.3	0.8696	1950	1335.0	0.2134
1899-1900	99.2	0.8534	1951	1105.8	
1901	101.6	0.9839	1952	1101.3	
1902	106.2	0.9414	1953	1096.8	
1903	111.0	0.8718	1954	1092.4	
1904	116.0	1.1122	1955	1087.9	
1905	121.2	0.7982	1956	1083.5	
1906	126.7	0.8656	1957	1079.1	
1907	132.4	0.8282	1958	1074.7	
1908	138.4	0.8391	1959	1070.4	
1909	144.6	0.8921	1960	1066.0	
1910	151.2	0.8536	1961	1061.7	
1911	158.0	0.8168	1962-63	1225.8	

Appendix 3

Nominal Wage, Cost of Living and Real Wage Data for Indonesia
Java 1820-1940, Outer Provinces 1878-1939

APPENDIX TABLES 3.1-2: Nominal wage indices

Nominal Wages for Javan Sugar Coolies 1820-1940: Wages in cents per day, as given by Boomgaard in <u>Changing Economy in Indonesia</u>, vol. 13. 1820 data come from Table 1; 1855 data from Table 3.2; 1861-1866 data from Table 5.1; 1869-1871 data from Table 5.2; 1875-1915 data from Table 5.4 (discarded outliers at 1889 Semarang, 1910 Kediri, and no data given for 1896); 1916-1920 data from Tables 10.1 and 10.3; and 1921-1940 data from Table 9.2.

A coolie is a manual, common laborer working either in the fields of a plantation or on the production floor of a factory. The labor force was primarily male until around 1880, at which point women and children became more prominent, eventually reaching 45 percent of the workforce in the sugar industry in 1925. In nineteenth century Indonesia, Chinese immigrants sometimes provided coolie labor. Where the nationality of workers is given by Boomgaard, the data on Chinese laborers have been omitted, and only Javanese coolie wages are used.

Up to 1920, Boomgaard reports annual regional wages as a range between a minimum and a maximum. We took the unweighted mean of the minimum and the maximum, since movements of the mean matched those of the range itself, suggesting that Boomgaard's concern with this aspect of the data is overdrawn. Our time-series uses annual averages for Java as a whole, which were found as an unweighted average of the regional observations (because we could not find data for the sizes of the sugar coolie workforces in the individual regions, the mean is unweighted rather than weighted). To maintain continuity, the data for the regions of Yombang, Mojokerto and Nganjuk were not included, as they only appear after 1930.

From 1921-1940, Boomgaard does not give a range but instead gives the average values for males and females. However, we also treated the male and female data as the bounds of a range, taking the unweighted mean of the two as the mean wage, the lower of the two (almost always female) as the min and the higher as the max. As noted above, the time series of the means and the min-max gender-determined ranges 1921-1940 are almost perfectly correlated, and again, our final time-series uses annual averages for Java as a whole, which were found by averaging the regional means.

Since sugar coolie data were unavailable for the period from 1916 to 1920, we substituted data for wages in the oil and metallurgical industries (Tables 10.1 and 10.3). In order to do so, we had to adjust the data for wage differences between the oil/metallurgical industry and the sugar industry: using the 1907-1915 data for sugar (Table 5.4) and oil/metallurgical (Tables 10.1 and 10.3), we found the ratio of mean values in the two industries to be 0.745. By multiplying oil/metallurgical wages by this ratio, we were able to adjust for the difference across industries, thereby obtaining estimates for the 1916-1920 sugar industry wages. Using the same ratio, the adjusted values for 1921-1923 oil/metallurgical wages were found to match up precisely with the actual observed values for sugar wages during the same time period (Table 9.2), giving us reason to believe that the adjustment was appropriate.

Due to gaps in the data, mean wages for some years (1821-1854, 1856-1860, 1867-1868, 1872-1874, and 1896) were interpolated by taking the difference between the two nearest years for which data were available and assuming that the wage changed by the same absolute amount during each of the intervening years.

Nominal Wages for Coolies in the Outer Provinces 1878-1939: Nominal wages for outer province coolies in cents per day, in Boomgaard, vol. 13. As was true of the Javan coolies, the outer province coolies were predominately male in the early years, but became progressively more mixed. The same procedure as the one used for Java was used here: Boomgaard's min and max were averaged to find the mean wage for each

province each year, and for each year the aggregate mean wage for all of Indonesia outside of Java was found by taking the unweighted mean of the provincial means. 1878-1902 data (for "craftsmen and coolies") are from Table 6.1 (discarded points at 1883 Bengkulu; 1897 Palembang); 1903-1913 data from Table 6.2 (discarded point at 1903 Riau; also, Table 6.2 gives data for railroad and plantation wages); 1914-1916 data from Table 10.3 (these observations are for oil coolies). We used only the Eastern Sumatra data for 1914-1916. Because we wanted to link this series as consistently as possible with the following series -- which includes only data for Eastern Sumatra and Palembang, we threw away the data for all provinces save these two. Furthermore, we had to throw away data for Palembang due to concerns about its consistency. The 1917-1939 data is taken from Table 8.2 (for tobacco coolies in Eastern Sumatra and Palembang).

As in the Java series, data from several different industries had to be used since we could not find a complete time series for any individual industry. We made the necessary adjustments in an analogous fashion, by finding the cross-industry wage ratios for years for which we had overlapping data. Three such adjustments have been made in this series:

1902-1903: There is no overlap between Tables 6.1 and 6.2. However, the series for Public Works wages (below) are remarkably stable between 1902 and 1903. There is no reason to believe that outer province wages behaved any differently during that year. Thus, we equated 1902 and 1903 and used the ratio of their original values to adjust the remainder of Table 6.2 through 1913.

1913-1914: Here the data switches from plantation and railroad coolies to oil coolies between Tables 6.2 and 10.3. The average ratio of Table 6.2 to Table 10.3 for the overlapping years 1910-1913 was 1.18. We controlled for differences across the industries by multiplying the 1914-1919 data from Table 10.3 by a factor of 1.18.

1916-1917: This is the transition between the adjusted Table 10.3 data and the long 1917-1939 series from Table 8.2. Table 10.3 is for oil coolies and Table 8.2 is for tobacco coolies. Both give reliable data only for Eastern Sumatra. The average ratio of Table 10.3 to Table 8.2 for the overlapping years 1917-1919 wages was 0.92. We controlled for differences across the industries by multiplying the 1920-1939 data from Table 8.2 by a factor of 0.92.

The following missing years were filled in by interpolation: 1881 and 1896.

Nominal Wages for Javan Public Works Coolies 1855-1912: These, as before, are daily wages in cents for unskilled laborers (coolies) of a predominately male but increasingly mixed labor force. The source is Boomgaard, vol. 13: 1855 and 1860 data are from Table 4.1; 1860, 1864, 1868 and 1870 data from Table 4.1; 1863 and 1869 data from Table 4.6; 1893 data from Table 4.4; 1895-1909 data from Table 4.5; and 1903-1912 data from Table 4.7. Where Table 4.7 overlaps with Table 4.5, an average was taken.

All nominal wage series were indexed 1912 = 100.

APPENDIX TABLE 3.3: Cost of living index

Cost of Living 1820-1940: This index was constructed using prices for rice, imported textiles, domestic cooking oils, and sugar:

Rice prices are taken from Boomgaard, vol. 4. Two series of rice prices are reported in this source: 1744-1846 and 1848-1940. The notes to the tables emphasized that no attempt had been made to link the two. To do so, we used an alternative series of rice prices found in Boomgaard, Vol. 14. This series gives rice prices for each of up to 20 locations for the years 1837-1872. We used an unweighted average of the prices given in this series from 1846-1848 to link the two series from Boomgaard, vol. 4. A price index for rice is thus constructed 1820-1940.

Imported textile prices are taken from Boomgaard, vol. 15, Table 1A. The textiles used to construct the index were chosen on the basis of continuity and relevance to a worker's needs. Each type of textile is assigned a code number for easy reference in Boomgaard; from now on we will give these reference numbers

along with the names of the commodities used. Specifically, textile price were for madapollams 7, 25, 27; shirtings 35, 36; sarongs 41; cambrics 14; drills 18; calicoes 9; and prints 30. An unweighted average of these textile prices was constructed for 1827-1940.

       Cooking oil prices are taken from Boomgaard, Vol. 15, Table 3A. To eliminate high variability and discontinuity in the series, we used the prices of peanut and coconut oil in Surabaya alone, reference numbers 3 and 12 in Table 3A. These prices were only available for 1827 to 1873.

       Sugar prices are taken from Boomgaard, Vol. 15, Table 2A. This table is for export prices, but we used the prices at Javan port cities, thereby minimizing the effects of freight costs. Specifically, an unweighted average of sugar prices numbered 60, 62, 63, and 65 in Table 2A, dating from 1822 to 1937, was used to achieve continuity.

       The Cost of Living index was constructed using a weighted sum of the above prices. Because only rice prices were available for the entire interval from 1820 to 1940, the index incorporated different combinations of prices for different time spans. Sugar prices were available from 1822 to 1937, textile prices were available for 1827 to 1940 and oil prices were available from 1827 to 1873. The COL index consists of a weighted average of the available prices, and is therefore calculated in a different manner for each of five periods. The budget weights are taken from Scheltema (pp. 48-52), augmented by weights taken from other parts of Southeast Asia. The budget weights used in constructing the cost of living index are: 1820-1821, rice 100%; 1822-1826, rice 95.436%, sugar 4.564%; 1827-1873, rice 82%, sugar 3.92%, oils 1.02%, textiles 13.007%; 1874-1937, rice 83.02%, sugar 3.97%, textiles 13.007%; 1938-1940, rice 86.992% and textiles 13.007%.

       These five series were then linked over each break; 1821-1822, 1826-1827, 1873-1874, and 1937-1938 to create a continuous series from 1820-1940.

       Cost of living series were indexed 1912 = 100.

APPENDIX TABLES 3.4-5: Real wage indices

       Real Wages 1820-1940: To calculate real wages, the nominal wage series were divided by the COL index. Real wage series were indexed 1912=100.

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Appendix Table 3.1

Nominal Wages Indices for Java, 1820-1940 (1912=100)

Year	Sugar Coolies	Public Works Coolies	Year	Sugar Coolies	Public Works Coolies
1820	49.4	.	1897	95.8	122.9
.	.	.	1898	94.4	118.2
1855	61.1	54.5	1899	93.1	113.5
1856	67.0		1900	88.6	108.8
1857	72.9		1901	95.4	104.1
1858	78.8		1902	106.2	94.7
1859	84.6		1903	83.7	95.3
1860	90.5	77.1	1904	86.9	93.4
1861	96.1	87.8	1905	88.6	93.1
1862	97.4	98.7	1906	87.3	93.1
1863	93.1	109.7	1907	89.9	96.9
1864	89.9	109.4	1908	89.5	94.7
1865	83.7	109.1	1909	90.5	98.4
1866	90.5	108.8	1910	92.8	99.4
1867	97.7	108.8	1911	98.0	99.4
1868	104.9	108.5	1912	100.0	100.0
1869	112.4	141.1	1913	103.3	
1870	113.4	156.7	1914	106.2	
1871	111.8		1915	110.1	
1872	112.4		1916	109.5	
1873	112.7		1917	101.6	
1874	113.1		1918	107.8	
1875	113.7		1919	117.6	
1876	113.7		1920	135.6	
1877	110.5		1921	144.4	
1878	112.7		1922	131.0	
1879	116.0		1923	135.3	
1880	116.0		1924	134.3	
1881	114.7		1925	130.4	
1882	131.0		1926	130.7	
1883	129.4		1927	132.4	
1884	128.1		1928	132.4	
1885	120.9		1929	138.6	
1886	108.8		1930	132.0	
1887	100.0		1931	130.4	
1888	98.7		1932	107.2	
1889	100.0		1933	94.1	
1890	99.0		1934	75.8	
1891	100.7		1935	76.5	
1892	105.9		1936	71.6	
1893	103.3	78.4	1937	72.5	
1894	100.0	117.6	1938	90.8	
1895	98.0	156.7	1939	83.3	
1896	112.4	125.4	1940	82.4	

Appendix Table 3.2

Nominal Wages Indices for the Outer Provinces, 1878-1939 (1912=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1878	98.3	1899	97.6	1920	116.4
1879	100.7	1900	100.7	1921	135.7
1880	100.3	1901	93.7	1922	122.0
1881	103.3	1902	92.7	1923	116.4
1882	106.3	1903	97.7	1924	130.1
1883	109.8	1904	92.1	1925	126.0
1884	105.6	1905	94.8	1926	139.7
1885	105.8	1906	96.2	1927	137.4
1886	103.3	1907	97.2	1928	143.7
1887	104.2	1908	94.9	1929	146.9
1888	108.2	1909	98.3	1930	137.0
1889	104.5	1910	100.3	1931	131.6
1890	106.5	1911	100.7	1932	124.4
1891	106.6	1912	100.0	1933	106.8
1892	108.4	1913	100.0	1934	105.2
1893	108.4	1914	105.2	1935	104.4
1894	101.0	1915	105.2	1936	106.8
1895	97.9	1916	105.2	1937	110.8
1896	97.7	1917	104.4	1938	110.0
1897	97.6	1918	106.8	1939	107.1
1898	97.6	1919	103.5		

Appendix Table 3.3

Cost of Living Index for Indonesia, 1820-1940 (1912=100)

Year	COL Index	Year	COL Index	Year	COL Index
1820	92.3	1861	107.0	1902	75.3
1821	107.0	1862	120.5	1903	77.8
1822	107.8	1863	128.4	1904	74.2
1823	94.9	1864	110.0	1905	71.8
1824	89.2	1865	138.6	1906	75.7
1825	107.6	1866	151.9	1907	84.9
1826	108.9	1867	107.7	1908	89.5
1827	82.0	1868	93.4	1909	82.0
1828	100.1	1869	98.5	1910	82.7
1829	95.1	1870	94.2	1911	89.4
1830	95.8	1871	97.6	1912	100.0
1831	97.9	1872	123.5	1913	92.7
1832	105.7	1873	113.7	1914	90.8
1833	87.4	1874	117.6	1915	89.5
1834	94.1	1875	107.0	1916	98.9
1835	93.4	1876	103.5	1917	115.8
1836	89.3	1877	105.7	1918	147.9
1837	79.7	1878	121.1	1919	158.2
1838	82.9	1879	108.8	1920	241.0
1839	93.0	1880	110.8	1921	181.6
1840	86.8	1881	109.4	1922	138.6
1841	83.6	1882	105.9	1923	133.6
1842	91.9	1883	96.9	1924	146.7
1843	87.9	1884	78.9	1925	143.4
1844	94.9	1885	73.2	1926	143.7
1845	103.3	1886	71.2	1927	133.1
1846	98.2	1887	68.6	1928	130.7
1847	89.7	1888	68.5	1929	137.1
1848	87.7	1889	69.0	1930	132.9
1849	92.4	1890	74.9	1931	87.2
1850	90.0	1891	75.6	1932	71.2
1851	98.8	1892	85.1	1933	57.6
1852	95.0	1893	75.1	1934	55.9
1853	89.2	1894	69.3	1935	55.7
1854	104.2	1895	62.3	1936	52.5
1855	107.4	1896	63.5	1937	65.4
1856	91.9	1897	83.8	1938	66.5
1857	125.2	1898	69.9	1939	63.5
1858	94.5	1899	66.5	1940	66.3
1859	105.2	1900	67.5		
1860	98.7	1901	80.3		

Appendix Table 3.4

Real Wages Indices for Java, 1820-1940 (1912=100)

Year	Sugar Coolies	Public Works Coolies	Year	Sugar Coolies	Public Works Coolies
1820	53.5	.	1897	114.3	146.7
.	.	.	1898	135.2	169.1
1855	56.9	50.8	1899	140.2	170.8
1856	72.9		1900	131.3	161.2
1857	58.2		1901	118.9	129.7
1858	83.3		1902	141.1	125.8
1859	80.5		1903	107.5	122.4
1860	91.7	78.1	1904	117.1	125.8
1861	89.8	82.1	1905	123.3	129.6
1862	80.8	82.0	1906	115.2	123.0
1863	72.6	85.5	1907	105.9	114.1
1864	81.7	99.5	1908	100.0	105.7
1865	60.3	78.7	1909	110.4	120.0
1866	59.6	71.6	1910	112.3	120.2
1867	90.7	101.0	1911	109.6	111.1
1868	112.3	116.1	1912	100.0	100.0
1869	114.1	143.2	1913	111.4	
1870	120.4	166.5	1914	116.9	
1871	114.5		1915	123.0	
1872	91.0		1916	110.7	
1873	99.2		1917	87.8	
1874	96.1		1918	72.9	
1875	106.2		1919	74.4	
1876	109.9		1920	56.3	
1877	104.5		1921	79.5	
1878	93.1		1922	94.5	
1879	106.6		1923	101.2	
1880	104.8		1924	91.6	
1881	104.9		1925	90.9	
1882	123.7		1926	90.9	
1883	133.5		1927	99.4	
1884	162.4		1928	101.3	
1885	165.1		1929	101.1	
1886	152.9		1930	99.3	
1887	145.8		1931	149.5	
1888	144.1		1932	150.6	
1889	145.0		1933	163.5	
1890	132.2		1934	135.7	
1891	133.1		1935	137.3	
1892	124.5		1936	136.2	
1893	137.6	104.4	1937	110.9	
1894	144.3	169.6	1938	136.7	
1895	157.4	251.7	1939	131.1	
1896	177.1	197.5	1940	124.2	

Appendix Table 3.5

Real Wages Indices for the Outer Provinces, 1878-1939 (1912=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1878	81.1	1899	146.8	1920	48.3
1879	92.6	1900	149.3	1921	74.7
1880	90.6	1901	116.8	1922	88.0
1881	94.5	1902	123.1	1923	87.1
1882	100.3	1903	125.5	1924	88.7
1883	113.3	1904	124.1	1925	87.9
1884	133.9	1905	131.9	1926	97.2
1885	144.5	1906	127.0	1927	103.3
1886	145.2	1907	114.5	1928	110.0
1887	151.9	1908	106.0	1929	107.1
1888	158.0	1909	119.8	1930	103.1
1889	151.6	1910	121.4	1931	150.9
1890	142.2	1911	112.6	1932	174.8
1891	141.0	1912	100.0	1933	185.5
1892	127.4	1913	107.9	1934	188.2
1893	144.4	1914	115.9	1935	187.4
1894	145.8	1915	117.6	1936	203.2
1895	157.2	1916	106.4	1937	169.4
1896	153.9	1917	90.2	1938	165.5
1897	116.4	1918	72.2	1939	168.5
1898	139.6	1919	65.4		

Appendix 4

Nominal Wage, Cost of Living, Real Wage and Land Rent Data for Japan 1831-1938

Overview: The complete real wage series for the period of 1831-1938 is a combination of three series: Sano's series, a series for the early Meiji period and a series for the modern period. The first two series were linked in the overlapping year 1874, and the early Meiji series was linked to the modern series at 1887. The complete series maintains the base year of 1934-1936 = 100.

APPENDIX TABLE 4.1: Nominal wage index

Nominal Wages 1868-1886: Daily wages for carpenters in Japan (Bank of Japan: 72-73). The year 1881 was derived by geometric interpolation.

Nominal Wages 1887-1938: Daily wages for carpenters in Tokyo (Long Term Economic Statistics, hereafter called LTES, vol. 8: 244-245). The missing years 1888-91 and 1893 were filled by geometric interpolation.

APPENDIX TABLE 4.2: Cost of living index

Cost of Living 1868-1886: Taken to be the price of rice in Tokyo (Bank of Japan: 90).

Cost of Living 1887-1938: The cost of living index was constructed from prices in Tokyo for rice, soybeans, and salt (LTES vol. 8: 153-154), and prices of firewood and salted fish (LTES vol. 8: 138-151). The missing years 1894-95 for the price of salt were filled by linear interpolation. The (fixed) weights were derived from consumption budgets for the "typical" family (LTES vol. 8: 138-141 and vol. 6: 136-137). The weights were: cost of living = (rice).70 + (soy).07 + (salt).01 + (firewood).08 + (salted fish).14.

APPENDIX TABLE 4.3: Real wage index

Real Wages 1831-1882: An index of daily real wages for Tokyo carpenters (Sano 1962: Table 6, p. 24). The nominal wages for these construction workers and their cost of living were extracted by Sano from the yearly series *Wagakuni Shohin Soba Tokei-hyo*. The deflator is based on fixed expenditure share weights of a representative worker's family. Between the years 1854 and 1861, the Sano series demonstrates a trend that is neither consistent with the general trend of the real wage before and after these dates, nor plausible with regard to the economic state of Japan at the time. In particular, the series undergoes some very improbable upward spikes, rising by a factor of three to five, in particular in 1855. We removed these aberrations in two steps: first, the 1855 observation was purged and linearly interpolated as an average of 1854 and 1856; second, we interpolated linearly over the period from 1854 to 1861. In order that the interpolation end points not be set arbitrarily, the real wages in 1854 and 1861 were computed as a three year average of 1853-55 (the "purged" 1855 observation replaced by the average of 1854 and 1856) and 1860-62. We used a same method of interpolation for the years 1870-1882 for similar reasons. Only the years 1870-1874 from that interval come from Sano, the remainder coming from the Bank of Japan.

Real Wages 1883-1938: The nominal wage series was divided by the COL index and indexed to 1900=100.

APPENDIX TABLE 4.4: Land price and rent index

Land Rents and Land Prices 1885-1945: Two series for paddy field land prices were available: a price series for 1890-1945 (LTES vol. 9, Table 34) and a price index for 1913-1965 (Bank of Japan: 88). The LTES series is for all of Japan, but does not include the island of Hokkaido until the year 1911. The Bank of Japan series is a weighted average for eleven districts, including Hokkaido.

The 1885-1945 price series for paddy field land rents (LTES vol. 9, Table 34) includes Hokkaido for all years except for 1885, 1890 and 1899. All three series were in units of yen per *tan* (1 *tan* = 991.74 m^2).

The table also reports the ratio of wages to land rents indexed to 1934-36 = 1.00.

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Appendix Table 4.1

Nominal Wage Index for Japan, 1868-1938 (1934-1936=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1868	25.7	1892	13.9	1916	43.7
1869	25.7	1893	14.6	1917	49.3
1870	25.7	1894	15.4	1918	94.5
1871	25.7	1895	16.4	1919	94.5
1872	25.7	1896	19.5	1920	134.6
1873	21.6	1897	22.6	1921	136.1
1874	20.0	1898	24.1	1922	149.5
1875	21.6	1899	26.2	1923	153.6
1876	22.1	1900	27.7	1924	158.7
1877	22.1	1901	30.3	1925	153.1
1878	21.1	1902	29.8	1926	150.0
1879	21.1	1903	30.3	1927	149.0
1880	15.9	1904	30.3	1928	145.9
1881	16.4	1905	30.8	1929	142.8
1882	17.0	1906	33.4	1930	127.9
1883	14.4	1907	38.5	1931	109.9
1884	11.8	1908	41.6	1932	101.7
1885	11.8	1909	41.1	1933	96.6
1886	11.8	1910	41.1	1934	98.6
1887	11.3	1911	42.6	1935	99.1
1888	11.8	1912	44.7	1936	102.2
1889	12.3	1913	45.2	1937	113.0
1890	12.8	1914	44.2	1938	120.7
1891	13.3	1915	43.2		

Appendix Table 4.2

Cost of Living Index for Japan, 1868-1938 (1934-1936=100)

Year	COL Index	Year	COL Index	Year	COL Index
1868	23.0	1892	30.7	1916	56.3
1869	34.7	1893	30.4	1917	83.3
1870	35.4	1894	30.3	1918	103.9
1871	21.6	1895	31.0	1919	134.5
1872	14.9	1896	29.9	1920	152.1
1873	18.1	1897	36.0	1921	167.6
1874	28.0	1898	43.2	1922	180.8
1875	28.0	1899	42.2	1923	177.5
1876	19.3	1900	50.1	1924	184.8
1877	21.3	1901	49.4	1925	187.5
1878	23.2	1902	45.5	1926	164.8
1879	30.4	1903	46.9	1927	157.0
1880	40.3	1904	45.8	1928	155.3
1881	40.3	1905	47.6	1929	147.7
1882	34.1	1906	53.0	1930	125.8
1883	24.8	1907	64.4	1931	112.3
1884	19.6	1908	61.4	1932	85.7
1885	25.1	1909	53.2	1933	96.3
1886	21.8	1910	55.1	1934	99.2
1887	19.2	1911	60.2	1935	101.4
1888	18.7	1912	60.9	1936	99.4
1889	22.0	1913	61.3	1937	110.9
1890	28.7	1914	59.5	1938	127.4
1891	27.9	1915	51.5		

Appendix Table 4.3

Real Wage Index for Japan, 1831-1938 (1934-1936=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1831	54.1	1867	52.7	1903	64.6
1832	54.0	1868	67.5	1904	66.1
1833	53.5	1869	64.5	1905	64.8
1834	52.0	1870	57.3	1906	63.0
1835	46.1	1871	60.0	1907	59.9
1836	41.3	1872	59.0	1908	67.8
1837	29.7	1873	57.9	1909	77.3
1838	32.8	1874	56.8	1910	74.6
1839	40.9	1875	55.7	1911	70.8
1840	45.0	1876	55.1	1912	73.4
1841	47.3	1877	54.6	1913	73.8
1842	48.5	1878	53.5	1914	74.3
1843	52.6	1879	52.4	1915	83.8
1844	56.6	1880	51.3	1916	77.5
1845	57.4	1881	50.2	1917	59.2
1846	64.6	1882	49.1	1918	91.0
1847	54.5	1883	58.0	1919	70.3
1848	56.4	1884	60.1	1920	88.5
1849	56.6	1885	47.1	1921	81.2
1850	58.5	1886	54.3	1922	82.7
1851	61.9	1887	58.9	1923	86.5
1852	55.1	1888	63.0	1924	85.9
1853	53.6	1889	55.8	1925	81.7
1854	57.9	1890	44.5	1926	91.0
1855	59.0	1891	47.6	1927	94.9
1856	60.1	1892	45.1	1928	93.9
1857	61.2	1893	48.0	1929	96.7
1858	62.3	1894	50.9	1930	101.7
1859	63.4	1895	53.0	1931	97.9
1860	64.5	1896	65.4	1932	118.6
1861	65.1	1897	62.9	1933	100.3
1862	61.3	1898	55.8	1934	99.4
1863	67.4	1899	62.0	1935	97.8
1864	64.5	1900	55.4	1936	102.9
1865	48.6	1901	61.4	1937	101.9
1866	42.6	1902	65.4	1938	94.8

Appendix Table 4.4

Land Price and Rent Index for Japan, 1885-1938 (1934-1936=100)
Wage/Rental Ratio for Japan, 1885-1938 (1934-1936=1.00)

Year	Rent	Price (LTES)	Wage/Rent	Year	Rent	Price (LTES)	Price (Bank of Japan)	Wage/Rent
1885	18.6		0.6338	1912	77.6	72.4		0.5759
1886	20.7		0.5713	1913	78.1	71.9	72.4	0.5788
1887	22.7		0.4973	1914	50.9	66.1	66.6	0.8679
1888	24.8		0.4754	1915	49.8	61.3	61.1	0.8667
1889	26.8		0.4576	1916	55.8	64.8	65.1	0.7818
1890	28.8	15.9	0.4430	1917	80.3	76.1	76.7	0.6140
1891	29.9	17.8	0.4457	1918	134.0	103.9	104.1	0.7053
1892	30.9	19.7	0.4490	1919	192.2	172.6	169.7	0.4917
1893	31.9	21.7	0.4581	1920	151.1	143.8	142.8	0.8910
1894	32.9	23.6	0.4679	1921	147.6	142.2	143.0	0.9223
1895	34.0	25.6	0.4841	1922	106.7	150.4	149.0	1.4013
1896	35.0	27.5	0.5580	1923	127.9	142.2	140.1	1.2007
1897	36.0	29.4	0.6278	1924	149.4	137.2	134.6	1.0622
1898	37.0	31.4	0.6520	1925	136.5	132.2	134.6	1.1213
1899	38.1	33.3	0.6885	1926	125.0	139.8	137.3	1.1995
1900	41.5	33.3	0.6681	1927	104.4	132.7	131.3	1.4268
1901	45.0	34.6	0.6736	1928	99.5	130.6	129.3	1.4662
1902	48.5	35.7	0.6148	1929	97.8	126.9	125.7	1.4606
1903	51.9	36.2	0.5836	1930	61.4	118.2	117.5	2.0828
1904	48.2	35.2	0.6291	1931	61.4	98.3	98.8	1.7901
1905	44.0	36.2	0.7005	1932	73.6	93.3	92.8	1.3811
1906	51.4	41.2	0.6491	1933	73.6	92.8	93.0	1.3120
1907	58.8	43.1	0.6556	1934	98.1	95.4	95.7	1.0052
1908	56.1	49.4	0.7415	1935	101.0	99.6	99.8	0.9816
1909	45.9	53.7	0.8958	1936	100.8	104.9	104.6	1.0137
1910	47.6	57.9	0.8640	1937	116.0	118.4	113.0	0.9743
1911	64.6	62.1	0.6597	1938	122.5	125.0	124.8	0.9853

Appendix 5

Nominal Wage, Cost of Living, Real Wage and Land Rent Data for Korea 1906-1939

Overview: Wages are hourly unless otherwise noted. Nominal wage data for Korea are for outdoor laborers. The years from 1934 to 1936 were taken as the base period, with the average cost of living and nominal wage during these years set equal to 100.

APPENDIX TABLE 5.1: Nominal wage index

Nominal Wages 1906-1909: Simple average of nominal wages over major cities in Korea in *sen* for two forms of unskilled labor, *tobang* (earth workers; coolies) and *pyung in jok* (laymen*)*. Mizoguchi (1972) argues that the simple and weighted averages do not differ greatly, and therefore the former can be used to approximate the latter. From the same source, the average nominal wage for 1910 was linked to the 1910-1938 series which follows from Statistical Yearbook of Government-General in Korea (Chosen Sotofuku Tokei Nempo), various years.

Nominal Wages 1910-1938: Simple average of nominal wages of outdoor laborers over major cities in Korea in *sen*. From Umemura, Mataji, and Mizoguchi (1989: p. 262).

Nominal Wages 1939-1940: Simple average of nominal wages over major cities in Korea in *won* for two forms of unskilled labor, *tobang* (earth workers; coolies) and *pyung in jok* (laymen*)*. From the same source, the average nominal wage for 1938 was linked to the 1910-1938 series from Statistical Yearbook of Government-General in Korea (Chosen Sotofuku Tokei Nempo), various years.

APPENDIX TABLE 5.2: Cost of living index

Cost of Living 1906-1911: The COL for this period was estimated by taking a weighted average of three different prices: rice, barley and soybean. Chosen no Nogyo (1942) gives figures for the production of these crops in 1910, 1924, 1931 and 1935-40 (pp. 92, 99-103). To calculate budget weights for the COL index, we used the raw figures in Chosen no Nogyo to calculate the average yearly output of each crop, and made the assumption that the relatives sizes of the output stayed roughly the same over the years. However the figures in Chosen no Nogyo could not be used directly to calculate the weights. According to Kimura, rice consumption in Korea steadily dropped during the Japanese occupation because much of the rice produced in Korea was being exported to Japan (p. 638). As a result, the actual share of rice in the average Korean's budget was much lower than the proportion of rice to the total agricultural output of Korea. Although another source (Nasu) lists figures for the dietary composition of members of various social classes in Korea, it unfortunately does not mention barley (p. 150).

Fortunately, Kimura provides figures comparing the annual per capita consumption of rice to the consumption of the "coarse grains (millet, barley, rye and others) and beans" during the period 1915-1919. Moreover, soybeans were probably a close substitute for virtually all varieties of beans, and millet and barley were similar grains that were used interchangeably as an inferior substitute for rice (Kimura, 86). Thus, we assumed that the trend in soybean and barley price, which we weighted using the average annual production figures in Chosen no Nogyo, adequately represents the trend in the price of "coarse grains and beans" in general.

The Statistical Yearbook of Government-General in Korea (Chosen Sotofuku Tokei Nempo), various years, provided us with white rice prices for 1906-1911, barley prices for 1907-1911 and soybean prices for 1906-1911. We constructed for 1907-1911 a weighted average COL index using these three different prices and taken the following weights: 0.43828 for soybeans, 0.211963 for barley and 0.349754 for white rice. The

series in 1906 was constructed with soybean and white rice prices only. We accommodated their weights accordingly and used the year 1907 as link, in order to extend our COL series to 1906.

Cost of Living 1912-1939: The cost of living index is for Korean urban dwellers. It is taken from Mizoguchi, pp. 40-56. The 1906-1911 series was linked to the 1912-1939 one by the overlapping year 1912.

The entire cost of living series was indexed 1934-1936 = 100.

APPENDIX TABLE 5.3: Real wage index

Real Wages 1906-1939: Real wages were calculated by dividing the nominal wage by the cost of living, and indexed 1934-1936 = 100.

APPENDIX TABLE 5.4: Land rent index

Land Rents 1909-1938: Nominal rental data taken for farmland across thirteen main provinces of Korea. A weighted average rent was determined, using the actual amounts of farmland in each province as weights. The information was drawn from Statistical Yearbook of Government-General in Korea (Chosen Sotofuku Tokei Nempo), various years. The rent series was indexed 1934-36 = 100. The table also reports the ratio of wages to land rents for 1909-1938, which was in turn indexed 1934-1936 = 1.00.

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Appendix Table 5.1

Nominal Wage Index for Korea, 1906-1940 (1934-1936=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1906	62.9	1918	82.0	1930	97.5
1907	56.2	1919	126.6	1931	81.5
1908	64.0	1920	167.1	1932	78.5
1909	54.0	1921	160.4	1933	81.8
1910	50.0	1922	151.8	1934	74.4
1911	42.1	1923	155.2	1935	85.1
1912	43.8	1924	126.5	1936	140.5
1913	46.5	1925	123.1	1937	141.5
1914	47.9	1926	121.9	1938	95.9
1915	48.3	1927	107.9	1939	117.8
1916	37.5	1928	116.5	1940	141.3
1917	44.7	1929	108.8		

Appendix Table 5.2

Cost of Living Index for Korea, 1906-1939 (1934-1936=100)

Year	COL Index	Year	COL Index	Year	COL Index
1906	50.5	1918	104.4	1930	107.4
1907	51.0	1919	139.7	1931	91.4
1908	48.6	1920	157.1	1932	93.7
1909	41.2	1921	133.9	1933	92.9
1910	45.6	1922	137.4	1934	94.9
1911	61.1	1923	131.8	1935	99.5
1912	72.6	1924	133.9	1936	105.6
1913	69.2	1925	134.8	1937	114.8
1914	63.7	1926	127.6	1938	128.5
1915	60.1	1927	121.1	1939	141.3
1916	65.8	1928	118.4		
1917	80.8	1929	118.4		

Appendix Table 5.3

Real Wage Index for Korea, 1906-1939 (1934-1936=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1906	125.7	1918	79.4	1930	91.7
1907	111.3	1919	91.5	1931	90.0
1908	132.9	1920	107.4	1932	84.6
1909	132.4	1921	121.1	1933	89.0
1910	110.7	1922	111.7	1934	79.1
1911	69.7	1923	119.0	1935	86.5
1912	61.0	1924	95.4	1936	134.4
1913	67.8	1925	92.3	1937	124.5
1914	76.0	1926	96.5	1938	75.4
1915	81.2	1927	90.0	1939	84.2
1916	57.6	1928	99.4		
1917	55.8	1929	92.8		

Appendix Table 5.4

Land Rent Index for Korea, 1909-1938 (1934-1936=100)
Wage/Rental Ratio in Korea, 1909-1938 (1934-1936=1.00)

Year	Rent Index	Wage/Rent	Year	Rent Index	Wage/Rent	Year	Rent Index	Wage/Rent
1909	106.7	0.5144	1919	118.3	1.0872	1929	82.1	1.3455
1910	73.0	0.6959	1920	142.6	1.1897	1930	74.6	1.3276
1911	85.5	0.5006	1921	128.3	1.2703	1931	78.4	1.0556
1912	84.4	0.5278	1922	127.2	1.2129	1932	81.9	0.9736
1913	76.2	0.6196	1923	193.0	0.8172	1933	125.1	0.6643
1914	68.8	0.7070	1924	135.2	0.9504	1934	90.6	0.8340
1915	80.5	0.6092	1925	126.2	0.9912	1935	99.1	0.8727
1916	92.8	0.4104	1926	124.9	0.9911	1936	110.3	1.2933
1917	182.6	0.2487	1927	124.6	0.8798	1937	113.8	1.2630
1918	218.2	0.3818	1928	115.0	1.0293	1938	110.2	0.8836

Appendix 6

Nominal Wage, Cost of Living and Real Wage Data for the Philippines 1899-1940

Overview: A unified nominal wage series was constructed for the period from 1899 to 1940 by linking together the partially overlapping wage series for different groups of workers. A COL index was constructed by linking together a weighted price series for rice and sugar for the early years with a COL index for lower income families in Manila for the later years. The real wage series was constructed by deflating the nominal wage series by the COL index. While the sources are not always clear regarding the location of the labor markets being observed, it seems safe to assume it is the Manila area.

APPENDIX TABLE 6.1: Nominal wage index

Nominal Wages 1899-1941: The 1903 Census lists hourly wage (in pesos) for "day laborers" for each year between 1899 and 1902 (inclusive). The Second Annual Report of the Bureau of Labor lists hourly wage for "municipal day laborers" for each year between 1899 and 1910 (inclusive), and the Fourth Annual Report of the Bureau of Labor lists hourly wage figures for the same group for 1911 and 1912. The 1918 Census lists hourly wage figures for "industrial commercial workmen" for 1903-1918 and Labor Conditions in the Philippine Islands lists hourly wage figures for "lumber laborers" for 1913-1926. The Statistical Bulletin lists hourly wage figures for "common laborers in lumber yards" for 1918 to 1928, and the Journal of Philippine Statistics lists hourly wage figures for "common laborers" for 1941-1948.

All of the series had gaps in them, which were filled by geometric interpolation for the following periods:

"Day laborers": 1899-1901
"Municipal day laborers": 1899-1901
"Industrial commercial workmen": 1904-1910, 1912-1916
"Lumber laborers": 1914-1919, 1921-1922, 1924-1925
"Common laborers in lumber yards": 1919, 1921, 1923
"Common laborers": 1942-1944

The day laborer figures were linked to the municipal day laborer figures at the year 1902 (the pre-1898-1901 municipal day laborer figures were discarded). The municipal day laborer figures were linked to the industrial commercial workmen figures at the year 1911 (the 1912 municipal day laborer figures and the 1903-1910 industrial commercial workmen figures were discarded). The industrial commercial workmen figures were linked to the lumber laborer figures at the year 1918 (the 1913-1917 lumber laborer figures were discarded). The lumber laborer figures were linked to the "common laborers in lumber yards" figures at the year 1918 (the 1919-1926 lumber laborer figures were discarded). The result was a unified series spanning the period from 1899 to 1928.

Finally, we assumed that the wages for "common laborers" were similar to the wages for "common laborers in lumber yards," and linked the 1899-1928 series to the 1941-1948 series from the Journal of Philippine Statistics by interpolating geometrically the wage figures for the years 1929-1940.

The final linked series for 1899 to 1940 was then indexed 1941 = 100.

APPENDIX TABLES 6.2: Cost of living indices

Cost of Living 1899-1934: Cost of living during this period was calculated using a weighted average of the prices of exported sugar and imported rice. The data are available through 1937, and come from the Annual Report of the Insular Collector of Customs, which provides annual figures for the quantity of sugar exports and rice imports in terms of tonnage (kilograms) and the total peso-denominated values of the

commodities. By dividing the peso-denominated values of the commodities by the tonnage, we found the price series for exported sugar and (in pesos/kg) and imported rice (in pesos/kg).

The cost of living index was constructed by applying the following weights to the two consumption goods: 91.02% for rice and 8.98% for sugar. These weights were taken from the average Thai household budget in 1962-1963 (Household Expenditure Survey).

Cost of Living 1935-1941: The Journal of Philippine Statistics (vol. 8) lists COL figures for "lower income families in Manila" for the years 1935-1959. The figures are based on a weighted average of food prices (given a weight of 63.43%), rent (11.96%), clothing prices (2.04%), fuel/lighting/water prices (7.73%) and miscellaneous expenses (14.84%). This series was linked to the 1899-1937 series at the year 1935, forming the final COL series. Commodity prices data for 1936-37 were discarded.

The final linked cost of living series for 1899-1941 was then indexed 1941 = 100.

APPENDIX TABLES 6.3: Real wage index

Real Wages 1899-1941: Real wages were calculated by dividing the nominal wage series by the cost of living one and indexed to 1941 = 100.

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Appendix Table 6.1

Nominal Wage Index for the Philippines, 1899-1941 (1941=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1899	38.6	1913	65.8	1927	137.8
1900	46.8	1914	70.0	1928	133.7
1901	56.7	1915	74.5	1929	130.8
1902	68.8	1916	79.3	1930	127.9
1903	49.5	1917	84.5	1931	125.1
1904	49.5	1918	95.6	1932	122.3
1905	51.6	1919	210.6	1933	119.6
1906	51.6	1920	339.5	1934	116.9
1907	53.8	1921	270.8	1935	114.4
1908	53.8	1922	216.0	1936	111.8
1909	57.0	1923	197.2	1937	109.4
1910	58.1	1924	180.0	1938	106.9
1911	58.1	1925	257.2	1939	104.6
1912	61.8	1926	154.3	1940	102.3

Appendix Table 6.2

Cost of Living Index for the Philippines, 1899-1941 (1941=100)

Year	COL Index	Year	COL Index	Year	COL Index
1899	73.4	1913	83.3	1927	194.8
1900	68.5	1914	78.0	1928	129.5
1901	69.6	1915	72.5	1929	127.4
1902	68.9	1916	80.3	1930	155.7
1903	85.0	1917	85.8	1931	110.7
1904	66.4	1918	102.7	1932	88.2
1905	71.6	1919	199.2	1933	69.7
1906	71.5	1920	260.0	1934	88.2
1907	78.9	1921	130.3	1935	89.7
1908	79.8	1922	125.1	1936	87.4
1909	66.7	1923	135.0	1937	88.8
1910	72.3	1924	145.6	1938	82.1
1911	85.4	1925	145.7	1939	93.2
1912	98.5	1926	147.2	1940	97.3

Appendix Table 6.3

Real Wage Index for the Philippines, 1899-1941 (1941=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1899	52.6	1913	79.0	1927	70.8
1900	68.3	1914	89.7	1928	103.2
1901	81.6	1915	102.9	1929	102.7
1902	99.9	1916	98.8	1930	82.1
1903	58.2	1917	98.4	1931	113.0
1904	74.5	1918	93.1	1932	138.7
1905	72.1	1919	105.7	1933	171.6
1906	72.2	1920	130.6	1934	132.7
1907	68.2	1921	207.8	1935	127.5
1908	67.4	1922	172.7	1936	127.9
1909	85.5	1923	146.0	1937	123.1
1910	80.3	1924	123.7	1938	130.3
1911	68.0	1925	176.5	1939	112.2
1912	62.8	1926	104.9	1940	105.1

Appendix 7

Nominal Wage, Cost of Living, Real Wage and Land Rent Data for Taiwan 1897-1939

Overview: Wages for Taiwan are hourly unless otherwise noted. They are also for day laborers, except for 1897 to 1901 when the nominal wage for day laborers was estimated by wages of government workers. All series were indexed to 1934-36 = 100.

APPENDIX TABLE 7.1: Nominal wage index

Nominal Wages 1897-1901: Simple average of unskilled laborers' nominal wages, in *ch'ian* units, in major cities throughout Taiwan. Data taken from Statistical Yearbook of Government-General in Taiwan (Taiwan Sotofuku Tokei Nempo], various years.

Nominal Wages 1902-1938: Weighted average of nominal wages over major cities in Taiwan in *sen* units. The 1897-1901 series was linked to the 1902-1938 one at the overlapping year 1902. Data taken From Umemura and Mizoguchi (1989: p. 259).

Nominal Wages 1938-1939: Simple average of nominal wages over major cities in Taiwan in *ch'ian*. The 1938-1939 series was linked to the 1902-1937 series at the overlapping year 1938. Data taken from Statistical Yearbook of Government-General in Taiwan (Taiwan Sotofuku Tokei Nempo], various years.

The nominal wage series was indexed 1934-36 = 100.

APPENDIX TABLE 7.2: Cost of living index

Cost of Living 1897-1902: Given the absence of useful Taiwanese price data for these early years, we tried estimating the COL for Taiwan by two different measures: the CPI for Japan and the rice price for Japan. The Japan CPI is preferred because it is more comprehensive, and it is taken from LTES vol. 8 (Bukka). The 1903 Japan CPI figure was spliced onto the 1903-1938 CPI series for Taiwan.

Cost of Living 1903-1938: Cost of living index based on weights from a family budget survey for urban workers conducted 1934-1935. While our calculations are based on this index, another based on weights from a small scale survey conducted in 1919 yields similar COL trends. From Mizoguchi (1972: pp. 40-56).

Cost of Living 1939: Cost of living extrapolated from rice price trends in Taiwan. The average price of rice for 1938 was linked to the cost of living value for 1938 given in the 1903-1938 series, and then extrapolated to 1939. Data was taken from Statistical Yearbook of Government-General in Taiwan [Taiwan Sotofuku Tokei Nempo], various years.

The completed cost of living series was indexed 1934-36 = 100.

APPENDIX TABLE 7.3: Real wage index

Real Wages 1897-1939: Calculated by dividing the nominal wage by the cost of living series. The average real wages for 1934-1936 were set equal to 100.

APPENDIX TABLE 7.4: Land rent index

Land Rent 1904-1939: Land rent for farmland calculated by dividing the total value of all farmland by the area of farmland for each year. Both indices obtained from Statistical Yearbook of Government-General in Taiwan [Taiwan Sotofuku Tokei Nempo], various years. The rent series was indexed 1934-36 = 100. The table also reports the wage/rental ratio series indexed 1934-36 = 100.

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Appendix Table 7.1

Nominal Wage Index for Taiwan, 1897-1939 (1934-1936=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1897	41.3	1912	55.4	1927	107.1
1898	41.3	1913	55.5	1928	106.2
1899	42.4	1914	55.6	1929	110.8
1900	43.2	1915	51.6	1930	98.9
1901	42.6	1916	49.2	1931	104.5
1902	41.9	1917	60.1	1932	101.6
1903	41.3	1918	69.9	1933	98.9
1904	38.2	1919	110.3	1934	95.9
1905	46.3	1920	141.0	1935	99.9
1906	42.3	1921	112.4	1936	104.3
1907	46.5	1922	106.8	1937	106.7
1908	52.3	1923	101.2	1938	111.7
1909	49.9	1924	101.8	1939	118.5
1910	45.3	1925	106.6		
1911	54.1	1926	103.0		

Appendix Table 7.2

Cost of Living Index for Taiwan, 1897-1939 (1934-1936=100)

Year	COL Index	Year	COL Index	Year	COL Index
1897	40.4	1912	81.7	1927	109.1
1898	43.8	1913	79.2	1928	111.1
1899	41.4	1914	77.6	1929	111.8
1900	46.5	1915	72.9	1930	97.8
1901	45.5	1916	78.2	1931	88.4
1902	47.2	1917	96.3	1932	87.1
1903	49.6	1918	119.7	1933	91.7
1904	54.3	1919	148.7	1934	93.9
1905	57.1	1920	133.0	1935	99.8
1906	57.2	1921	117.6	1936	106.2
1907	57.4	1922	109.3	1937	112.8
1908	60.3	1923	107.4	1938	119.3
1909	64.3	1924	114.7	1939	134.0
1910	69.6	1925	119.6		
1911	75.2	1926	116.3		

Appendix Table 7.3

Real Wage Index for Taiwan, 1897-1939 (1934-1936=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1897	102.2	1912	67.7	1927	98.0
1898	94.2	1913	70.0	1928	95.5
1899	102.5	1914	71.6	1929	99.0
1900	93.0	1915	70.8	1930	101.0
1901	93.7	1916	62.9	1931	118.2
1902	88.6	1917	62.4	1932	116.6
1903	83.3	1918	58.3	1933	107.7
1904	70.2	1919	74.1	1934	102.0
1905	80.9	1920	105.9	1935	100.0
1906	73.9	1921	95.5	1936	98.1
1907	81.0	1922	97.6	1937	94.5
1908	86.7	1923	94.2	1938	93.5
1909	77.5	1924	88.6	1939	88.4
1910	65.0	1925	89.1		
1911	71.8	1926	88.5		

Appendix Table 7.4

Land Rent Index for Taiwan, 1904-1939 (1934-1936=100)
Wage/Rental Ratio in Taiwan, 1904-1939 (1934-1936=1.00)

Year	Rent Index	Wage/Rent	Year	Rent Index	Wage/Rent	Year	Rent Index	Wage/Rent
1904	66.9	0.5680	1916	65.8	0.7444	1928	94.4	1.1206
1905	66.9	0.6891	1917	65.6	0.9119	1929	94.1	1.1725
1906	66.7	0.6309	1918	65.4	1.0643	1930	93.9	1.0492
1907	66.6	0.6954	1919	96.8	1.1351	1931	93.8	1.1098
1908	66.4	0.7845	1920	96.5	1.4553	1932	90.7	1.1156
1909	66.2	0.7506	1921	96.4	1.1617	1933	89.2	1.1036
1910	66.2	0.6814	1922	96.0	1.1080	1934	89.1	1.0709
1911	64.6	0.8336	1923	95.9	1.0514	1935	106.4	0.9348
1912	65.9	0.8371	1924	95.6	1.0602	1936	104.4	0.9943
1913	66.2	0.8347	1925	95.1	1.1163	1937	104.2	1.0194
1914	66.1	0.8383	1926	94.7	1.0827	1938	104.2	1.0677
1915	66.0	0.7794	1927	94.5	1.1282	1939	104.0	1.1347

Appendix 8

Nominal Wage, Cost of Living and Real Wage Data for Thailand (Siam) 1820-1939

APPENDIX TABLE 8.1: Nominal wage index

Nominal Wage 1820-1939: This index reports a daily wage for urban unskilled labor -- primarily dock workers -- in Bangkok. Where wage data were missing, we interpolated geometrically between the two closest data points. Wage data are missing for the years 1821-1849, 1851-1863, 1865-1888, 1891-1895, 1897, 1900, 1903-1904, 1906-1911, and 1913. The wage data are from various sources, as compiled by Feeny. The wages were cross-referenced with data from Manarangsan and the Statistical Yearbook of Thailand, both of which reported similar figures.

The nominal wage series was indexed 1915 = 100.

APPENDIX TABLE 8.2: Cost of living index

Cost of Living 1865-1941: A cost of living (COL) index from 1865 through 1941 was constructed from price data for rice and white and grey shirting. A simple average of the white and grey shirting prices was used as a proxy for the price of clothing, and rice prices were used as a proxy for the cost of food. Agricultural (fixed) budget weights were used to approximate the expenditure composition between food and clothing for the urban labor household. All prices and weights were obtained from Feeny.

Cost of Living 1820-1864: The Thai COL index was extended backwards to 1820 by use of Indonesian rice prices. For sources, see the Indonesia Appendix 4.

The cost of living series was indexed 1915 = 100.

APPENDIX TABLE 8.3: Real wage index

Real Wage 1820-1939: The real wage was obtained by dividing the nominal wage by the cost of living. The series was indexed 1915 = 100.

APPENDIX TABLE 8.4: Land price index

Land price index 1915-1941: The land price corresponds to the average value per hectare of new mortgages registered in that year. The mortgages are for paddy land, which was for the most part found in the Central Plain, the major rice export producing region. The land price were obtained from Feeny (Table A1.8). When he presents information on land prices for the period t plus t+1, we assume the observation to correspond to year t. This series was then indexed 1915 = 100.

Land price index 1890-1914: Feeny (Table A1.7) also presents data on land values for 1889-1948 from different locations and for different qualities of land. The land in question corresponds to paddy and does not include observations for higher value garden or orchard lands. Even when most of the observations are for the Central Plain, comparisons are difficult because of differences in fertility, access to transportation, severity of floods, and other factors. With this in mind, we constructed a series for 1890-1926 using the information we considered most reliable and similar to the 1915-1941 series. Then, we linked this new series with the 1915-1941 one, using as a link the average of 1915-1926 for the former and the year 1920 for the latter. Where observations were missing, we used a geometric approximation between the two closest data points. Land price data were missing for the years 1891-1893, 1895-1896, 1898-1900, 1902 and 1908-1914.

Land price index 1870-1889: Feeny (Table 6-2) also presents an average real land rent for 1864-1874. We took this value as corresponding to 1870, and we transformed it to a nominal land rent estimate, using information on paddy (rice) prices given by Feeny in his Table A1.1 (using the same procedure as did Feeny, when transforming nominal values into real or vice versa). We also had information for the nominal land rent in 1903 (Feeny, Table 6-2). We assumed that the trend in nominal land rents for 1870-1903 is a good proxy for the trend in nominal land price. This allowed us to obtain an index of nominal land prices for 1870 and to complete the series for 1871-1889 by geometric interpolation.

We estimated an alternative nominal land price series for 1870-1889, using information provided by Feeny in Table A1.7. There, he presents a nominal rent value for 1890. We calculated the annual average geometric growth rate of the nominal rent value for 1870-1890 and used this growth rate to project backwards our land price index to 1870. This procedure, of course, assumes that trends in nominal land rents 1870-1889 is a good proxy for trends in nominal land prices. If, instead, mortgage interest rates fell sharply during this period, an upward trend in rents would understate the upward trend in land values.

From comparisons of these two alternative land price series for 1870-1889, we view the first as an upper bound and the second as a lower bound. Hence, our final land price series presented for this period takes a simple average of these two alternatives.

The land price series was indexed 1915 = 100. The table also presents the wage/land price ratio, which was indexed 1915 = 1.00.

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Appendix Table 8.1

Nominal Wage Index for Thailand (Siam), 1820-1939 (1915=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1820	49.3	1860	80.7	1900	96.2
1821	49.5	1861	83.7	1901	111.1
1822	49.8	1862	86.8	1902	116.7
1823	50.0	1863	90.0	1903	96.8
1824	50.2	1864	93.3	1904	80.3
1825	50.4	1865	93.6	1905	66.7
1826	50.6	1866	93.8	1906	72.2
1827	50.8	1867	94.1	1907	78.2
1828	51.0	1868	94.4	1908	84.7
1829	51.2	1869	94.6	1909	91.8
1830	51.5	1870	94.9	1910	99.4
1831	51.7	1871	95.2	1911	107.7
1832	51.9	1872	95.4	1912	116.7
1833	52.1	1873	95.7	1913	108.0
1834	52.3	1874	95.9	1914	100.0
1835	52.6	1875	96.2	1915	100.0
1836	52.8	1876	96.5	1916	133.3
1837	53.0	1877	96.7	1917	133.3
1838	53.2	1878	97.0	1918	133.3
1839	53.5	1879	97.3	1919	133.3
1840	53.7	1880	97.5	1920	133.3
1841	53.9	1881	97.8	1921	133.3
1842	54.1	1882	98.1	1922	133.3
1843	54.4	1883	98.4	1923	133.3
1844	54.6	1884	98.6	1924	149.3
1845	54.8	1885	98.9	1925	133.3
1846	55.1	1886	99.2	1926	133.3
1847	55.3	1887	99.4	1927	133.3
1848	55.5	1888	99.7	1928	133.3
1849	55.8	1889	100.0	1929	133.3
1850	56.0	1890	100.0	1930	133.3
1851	58.1	1891	93.5	1931	106.7
1852	60.2	1892	87.4	1932	106.7
1853	62.5	1893	81.6	1933	106.7
1854	64.8	1894	76.3	1934	106.7
1855	67.2	1895	71.3	1935	106.7
1856	69.7	1896	66.7	1936	106.7
1857	72.3	1897	66.7	1937	106.7
1858	75.0	1898	66.7	1938	106.7
1859	77.8	1899	83.3	1939	106.7

Appendix Table 8.2

Cost of Living Index for Thailand (Siam), 1820-1941 (1915=100)

Year	COL Index	Year	COL Index	Year	COL Index
1820	54.9	1861	68.2	1902	111.5
1821	64.1	1862	79.5	1903	123.3
1822	56.9	1863	90.0	1904	122.2
1823	50.3	1864	72.8	1905	122.5
1824	47.2	1865	94.3	1906	121.5
1825	58.0	1866	61.2	1907	121.1
1826	58.0	1867	41.1	1908	110.2
1827	41.5	1868	66.0	1909	113.8
1828	47.2	1869	70.5	1910	110.8
1829	50.3	1870	54.1	1911	133.7
1830	53.1	1871	66.2	1912	141.4
1831	55.9	1872	66.9	1913	107.2
1832	69.2	1873	51.2	1914	99.3
1833	61.5	1874	52.2	1915	100.0
1834	71.3	1875	53.1	1916	108.3
1835	68.7	1876	49.1	1917	111.8
1836	60.5	1877	68.6	1918	199.0
1837	49.2	1878	83.1	1919	355.2
1838	49.2	1879	63.7	1920	133.3
1839	70.8	1880	60.7	1921	140.2
1840	64.6	1881	54.2	1922	128.6
1841	63.6	1882	56.0	1923	138.8
1842	70.3	1883	61.1	1924	154.6
1843	65.1	1884	53.6	1925	156.4
1844	69.8	1885	56.7	1926	162.3
1845	79.5	1886	64.2	1927	150.3
1846	76.4	1887	62.0	1928	152.1
1847	87.7	1888	59.6	1929	157.9
1848	50.0	1889	60.7	1930	129.0
1849	56.9	1890	66.4	1931	74.8
1850	56.9	1891	65.0	1932	72.5
1851	63.7	1892	70.3	1933	64.2
1852	60.0	1893	68.9	1934	62.7
1853	53.2	1894	69.0	1935	77.7
1854	72.8	1895	65.8	1936	79.1
1855	77.3	1896	95.1	1937	87.8
1856	60.5	1897	85.1	1938	80.5
1857	94.1	1898	107.5	1939	76.9
1858	62.3	1899	108.7	1940	99.3
1859	73.6	1900	115.2	1941	164.1
1860	68.2	1901	112.1		

Appendix Table 8.3

Nominal Wage Index for Thailand (Siam), 1820-1939 (1915=100)

Year	Wage Index	Year	Wage Index	Year	Wage Index
1820	89.9	1860	118.2	1900	83.5
1821	77.3	1861	122.6	1901	99.1
1822	87.4	1862	109.1	1902	104.7
1823	99.4	1863	100.0	1903	78.5
1824	106.3	1864	128.3	1904	65.8
1825	86.9	1865	99.2	1905	54.4
1826	87.3	1866	153.3	1906	59.5
1827	122.3	1867	228.7	1907	64.6
1828	108.1	1868	143.0	1908	76.9
1829	102.0	1869	134.2	1909	80.6
1830	96.9	1870	175.3	1910	89.7
1831	92.4	1871	143.8	1911	80.5
1832	75.0	1872	142.6	1912	82.5
1833	84.7	1873	187.0	1913	100.7
1834	73.4	1874	183.8	1914	100.7
1835	76.5	1875	181.2	1915	100.0
1836	87.2	1876	196.5	1916	123.1
1837	107.7	1877	141.0	1917	119.3
1838	108.1	1878	116.8	1918	67.0
1839	75.5	1879	152.7	1919	37.5
1840	83.1	1880	160.6	1920	100.1
1841	84.8	1881	180.6	1921	95.1
1842	77.0	1882	175.3	1922	103.7
1843	83.5	1883	160.9	1923	96.0
1844	78.3	1884	183.9	1924	96.6
1845	69.0	1885	174.4	1925	85.3
1846	72.0	1886	154.4	1926	82.1
1847	63.1	1887	160.3	1927	88.7
1848	111.0	1888	167.4	1928	87.7
1849	98.1	1889	164.7	1929	84.4
1850	98.5	1890	150.6	1930	103.4
1851	91.2	1891	143.8	1931	142.6
1852	100.3	1892	124.3	1932	147.2
1853	117.4	1893	118.6	1933	166.1
1854	89.1	1894	110.6	1934	170.0
1855	87.0	1895	108.4	1935	137.3
1856	115.2	1896	70.1	1936	134.8
1857	76.9	1897	78.4	1937	121.5
1858	120.3	1898	62.0	1938	132.4
1859	105.6	1899	76.7	1939	138.7

Appendix Table 8.4

Land Price Index for Thailand (Siam), 1870-1941 (1915=100)
Wage/Land Price Ratio in Thailand (Siam), 1870-1939 (1915=1.00)

Year	Land Price Index	Wage/Land Price	Year	Land Price Index	Wage/Land Price	Year	Land Price Index	Wage/Land Price
1870	2.6	36.6277	1894	11.6	6.5911	1918	81.0	1.6465
1871	2.7	35.4937	1895	18.0	3.9652	1919	102.4	1.3027
1872	2.8	34.3547	1896	27.9	2.3855	1920	109.7	1.2154
1873	2.9	33.2101	1897	43.4	1.5354	1921	110.6	1.2057
1874	3.0	32.0597	1898	46.3	1.4398	1922	124.8	1.0683
1875	3.1	30.9035	1899	49.4	1.6876	1923	122.2	1.0915
1876	3.2	29.7418	1900	52.7	1.8270	1924	125.4	1.1909
1877	3.4	28.5751	1901	56.2	1.9778	1925	151.6	0.8797
1878	3.5	27.4045	1902	90.2	1.2941	1926	149.5	0.8918
1879	3.7	26.2311	1903	144.7	0.6689	1927	152.0	0.8774
1880	3.9	25.0567	1904	144.7	0.5551	1928	171.1	0.7794
1881	4.1	23.8832	1905	231.6	0.2879	1929	172.7	0.7719
1882	4.3	22.7132	1906	144.7	0.4990	1930	177.4	0.7518
1883	4.6	21.5492	1907	217.1	0.3603	1931	158.2	0.6741
1884	4.8	20.3945	1908	197.0	0.4300	1932	139.8	0.7630
1885	5.1	19.2524	1909	178.9	0.5132	1933	114.6	0.9307
1886	5.5	18.1263	1910	162.3	0.6125	1934	105.3	1.0130
1887	5.8	17.0200	1911	147.3	0.7310	1935	119.2	0.8947
1888	6.3	15.9373	1912	133.7	0.8724	1936	111.6	0.9561
1889	6.7	14.8817	1913	121.4	0.8898	1937	116.1	0.9189
1890	7.2	13.8188	1914	110.2	0.9077	1938	113.2	0.9420
1891	8.1	11.4839	1915	100.0	1.0000	1939	145.3	0.7341
1892	9.2	9.5436	1916	86.2	1.5472	1940	141.2	
1893	10.3	7.9311	1917	70.5	1.8915	1941	134.1	

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