

The Standard of Living debate and Britain's industrial revolution

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2012

The debate about whether the standard of living for the common people increased or decreased during the classic period of the British industrial revolution between c. 1770-1850 has been one of the central controversies in discussions about Britain's industrial transformation. The early nineteenth century debate about the standard of living controversy between the poet Robert Southey and the historian Thomas Babington Macaulay was widely noted at the time and continues to be referenced in the literature. Other Victorian literary notables, such as Thomas Carlyle, Charles Dickens, Benjamin Disraeli, Friedrich Engels, and Karl Marx, also made important contributions to the "Condition of England" question. During the first half of the nineteenth century, few of the most prominent commentators on the subject doubted that the immense progress brought by the new mechanical means of production had not brought much, if any, economic improvement to the lives of ordinary workers. During the 1870s, Arnold Toynbee, the first historian to make the phrase "industrial revolution" popular in England, supported the pessimistic interpretation of the standard of living question. As the benefits of economic growth became more obvious for ordinary workers during the second half of the nineteenth century, more voices were heard, which argued that even during the classic period of industrialization, there had been some improvement in the standard of living for the common people. By the early twentieth century some serious quantitative research on the topic was beginning to show that there had been some improvement in the economic wellbeing of the common people even during the period c. 1770 to 1850. Other statistical research was less optimistic. At the same time, new historical research argued that, even if there had been some economic improvement in the wages of the common people (adjusted for changes in prices), their quality of life nonetheless deteriorated due to rapid urbanization, pollution, unhealthy and unsafe working and living conditions, loss of independence and status of workers in trades that formerly had employed mostly skilled workers, and many other factors that reduced the quality of life of the working classes. By the 1970s most economists were on the side of the optimists while the pessimists were reinforced by such widely read new left historians, such as E. P. Thompson and Eric Hobsbawm. More recently, as Western culture has become more conservative, or as some would say, more neo-liberal, there has been a new wave of optimistic contributions to the standard of living question, which has been bolstered by sophisticated econometric and statistical techniques and neo-classical economic theory. Nonetheless, the debate remains far from resolved. Two recent important contributors to the optimistic case are Peter Lindert and Jeffrey C. Williams while Charles H. Feinstein has provided a restatement of the pessimistic argument.

For a good recent introduction to this topic, see, Emma Griffin, "Winners and Losers: Living through the Industrial Revolution," *A Short History of the British Industrial Revolution*, New York: Palgrave Macmillan, 2010, chapter 9.

**An Optimistic Case for the Standard of Living Debate
according to Peter Lindert and Jeffrey G. Williams**

Lindert and Williams begin with a discussion of the structure of the work force during the first half of the nineteenth century in England and Wales.

Adult Male Employing Classes and Their Approximate Mean Positions in the Nineteenth Century Earning Ranks for England and Wales

| <i>Occupational Class</i> | <i>“Representative” Mean-wage Series used here</i> | <i>Approximate Mean-wage Percentile Positions in the Earnings Ranks</i> | |
|--|--|---|-------------|
| | | <i>1827</i> | <i>1851</i> |
| (1) Farm Labour (Bottom 40%) | (1L) farm labour | 13th | 14th |
| (2) Middle Group | (2L) non-farm common labour | 38th | 35th |
| | (5L) police and guards | | 50th |
| | (6L) colliers | 55th | 51st |
| | (5H) cotton spinners | 62nd | 58th |
| (3) Artisans (“Labour aristocracy”) | (2H) shipbuilding trades | 67th | 62nd |
| | (3H) engineering trades | 77th | 77th |
| | (4H) building trades | 74th | 63rd |
| | (6H) printing trades | 75th | 71st |
| (4) Blue-Collar Workers = (1)+(2)+(3) | | | |
| (5) White-Collar Employees | (3L) messengers and porters | 78th | 71st |
| | (4L) other government low-wage | 65th | 62nd |
| | (1H) government high-wage | 87th | 80th |
| | (7H) clergy | 90th | 81st |
| | (8H) solicitors and barristers | 95th | 100th |
| | (9H) clerks | 88th | 80th |
| | (10H) surgeons and doctors | 86th | 79th |
| | (11H) schoolmasters | 75th | 70th |
| | (12H) engineers, surveyors and other professionals | 89th | 94th |

Note: In order to determine the standard of living for various social groups, it is first necessary to size of each of the major groups of workers between 1827 and 1851. All groups listed in the table refers only to males (there has been a great deal of criticism of this in subsequent literature on the standard of living debate). The table also excludes the self-employed and permanently unemployed. The first group consists of hired farm workers, about the bottom two-fifths of all workers. The second group consists of non-farm low skilled workers. The third group consists of skilled artisans, who are sometimes called the ‘aristocracy of labor.’ Their earnings fall between the 60 and 80 percentiles of earnings. Combined, the first three groups constitute the ‘blue collar’ working class. The focus of the standard of living debate is and has always been about this working class since there is no doubt that the standard of living of fifth group, the white collar workers, improved significantly between c. 1750-1850.

Peter H. Lindert; Jeffrey G. Williamson, “English Workers' Living Standards during the Industrial Revolution: A New Look,” *The Economic History Review*, New Series, Vol. 36, No. 1 (Feb., 1983), p

Estimates of Nominal Earnings for Eighteen Occupations,
1751-1851: Adult Males, England and Wales (in current £’s).

Lindert and Williams (1983), p. 4.

| <i>Occupation</i> | <i>1755</i> | <i>1781</i> | <i>1797</i> | <i>1805</i> | <i>1810</i> | <i>1815</i> | <i>1819</i> | <i>1827</i> | <i>1835</i> | <i>1851</i> |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| (1L) farm labourers | 17.18 | 21.09 | 30.03 | 40.40 | 42.04 | 40.04 | 39.05 | 31.04 | 30.03 | 29.04 |
| (2L) non-farm common labour | 20.75 | 23.13 | 25.09 | 36.87 | 43.94 | 43.94 | 41.74 | 43.65 | 39.29 | 44.83 |
| (3L) messengers & porters | 33.99 | 33.54 | 57.66 | 69.43 | 76.01 | 80.69 | 81.35 | 84.39 | 87.20 | 88.88 |
| (4L) other government low-wage | 28.62 | 46.02 | 46.77 | 52.48 | 57.17 | 60.22 | 60.60 | 59.01 | 58.70 | 66.45 |
| (5L) police & guards | 25.76 | 48.08 | 47.04 | 51.26 | 67.89 | 69.34 | 69.18 | 62.95 | 63.33 | 53.62 |
| (6L) colliers | 22.94 | 24.37 | 47.79 | 64.99 | 63.22 | 57.82 | 50.37 | 54.61 | 56.41 | 55.44 |
| (1H) government high-wage | 78.91 | 104.55 | 133.73 | 151.09 | 176.86 | 195.16 | 219.25 | 222.95 | 270.42 | 234.87 |
| (2H) shipbuilding trades | 38.82 | 45.26 | 51.71 | 51.32 | 55.25 | 59.20 | 57.23 | 62.22 | 62.74 | 64.12 |
| (3H) engineering trades | 43.60 | 50.83 | 58.08 | 75.88 | 88.23 | 94.91 | 92.71 | 80.69 | 77.26 | 84.05 |
| (4H) building trades | 30.51 | 35.57 | 40.64 | 55.30 | 66.35 | 66.35 | 63.02 | 66.35 | 59.72 | 66.35 |
| (5H) cotton spinners | 35.96 | 41.93 | 47.90 | 65.18 | 78.21 | 67.60 | 67.60 | 58.50 | 64.56 | 58.64 |
| (6H) printing trades | 46.34 | 54.03 | 66.61 | 71.11 | 79.22 | 79.22 | 71.14 | 70.23 | 70.23 | 74.72 |
| (7H) clergy | 91.90 | 182.65 | 238.50 | 266.42 | 283.89 | 272.53 | 266.55 | 254.60 | 258.76 | 267.09 |
| (8H) solicitors and barristers | 231.00 | 242.67 | 165.00 | 340.00 | 447.50 | 447.50 | 447.50 | 522.50 | 1166.67 | 1837.50 |
| (9H) clerks | 63.62 | 101.57 | 135.26 | 150.44 | 178.11 | 200.79 | 229.64 | 240.29 | 269.11 | 235.81 |
| (10H) surgeons & doctors | 62.02 | 88.35 | 174.95 | 217.60 | 217.60 | 217.60 | 217.60 | 175.20 | 200.92 | 200.92 |
| (11H) schoolmasters | 15.97 | 16.53 | 43.21 | 43.21 | 51.10 | 51.10 | 69.35 | 69.35 | 81.89 | 81.11 |
| (12H) engineers & surveyors | 137.51 | 170.00 | 190.00 | 291.43 | 305.00 | 337.50 | 326.43 | 265.71 | 398.89 | 479.00 |

Note: All the average earnings have been calculated as full-time average annual wages for each group. The authors noted that some of these categories are self-explanatory but offered the following explanations: 4L-watchmen, guards, porters, messengers, Post Office letter carriers, janitors; 1H-clerks, Post Office sorters, warehousemen, tax collectors, surveyors, solicitors, clergymen, surgeons, medical officers, architects, engineers; 2h-shipwrights; 3H-fitters, turners, iron-moulders; 4H-bricklayers, masons, carpenters, plasterers; 6H-compositors.

Peter H. Lindert; Jeffrey G. Williamson, "English Workers' Living Standards during the Industrial Revolution: A New Look," *The Economic History Review*, New Series, Vol. 36, No. 1 (Feb., 1983), p. 4.

Cost of Living Index, 1781-1850 (1850=100)

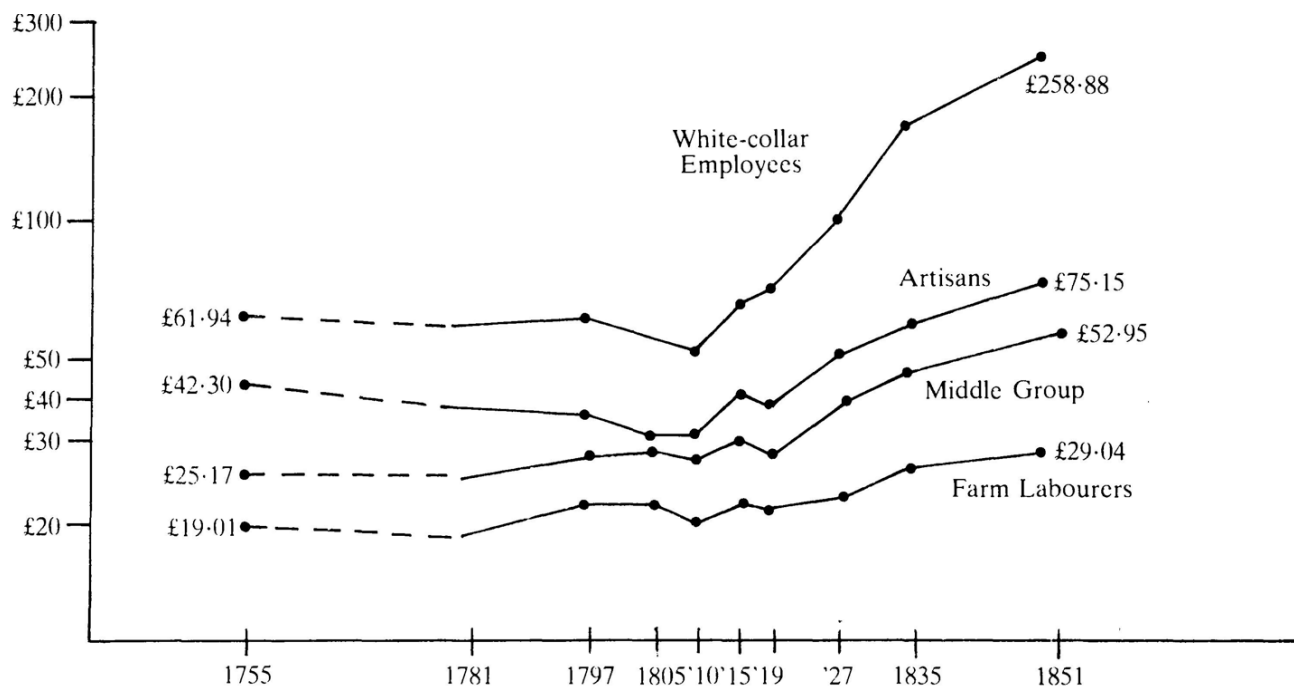
| <i>Year</i> | <i>Index</i> | <i>Year</i> | <i>Index</i> | <i>Year</i> | <i>Index</i> |
|-------------|--------------|-------------|--------------|-------------|--------------|
| 1781 | 118.8 | 1805 | 186.7 | 1828 | 143.2 |
| 1782 | 119.3 | 1806 | 178.5 | 1829 | 143.9 |
| 1783 | 121.9 | 1807 | 169.1 | 1830 | 141.3 |
| 1784 | 118.4 | 1808 | 180.5 | 1831 | 141.3 |
| 1785 | 112.3 | 1809 | 204.9 | 1832 | 133.9 |
| | | 1810 | 215.4 | | |
| 1786 | 109.6 | | | 1833 | 124.7 |
| 1787 | 112.5 | 1811 | 204.5 | 1834 | 117.6 |
| 1788 | 115.9 | 1812 | 235.7 | 1835 | 112.8 |
| 1789 | 122.3 | 1813 | 230.0 | 1836 | 126.4 |
| 1790 | 125.9 | 1814 | 203.3 | 1837 | 129.2 |
| 1791 | 121.2 | 1815 | 182.6 | 1838 | 138.3 |
| 1792 | 118.3 | 1816 | 192.1 | 1839 | 142.3 |
| 1793 | 127.3 | 1817 | 197.5 | 1840 | 138.4 |
| 1794 | 130.7 | 1818 | 192.4 | 1841 | 133.3 |
| 1795 | 153.8 | 1819 | 182.9 | 1842 | 123.4 |
| 1796 | 159.5 | 1820 | 170.1 | 1843 | 109.6 |
| 1797 | 138.8 | 1821 | 155.5 | 1844 | 114.5 |
| 1798 | 136.9 | 1822 | 139.8 | 1845 | 112.0 |
| 1799 | 155.7 | 1823 | 146.0 | 1846 | 116.4 |
| 1800 | 207.1 | 1824 | 154.6 | 1847 | 138.0 |
| 1801 | 218.2 | 1825 | 162.3 | 1848 | 110.9 |
| 1802 | 160.9 | 1826 | 144.4 | 1849 | 101.2 |
| 1803 | 156.8 | 1827 | 140.9 | 1850 | 100.0 |
| 1804 | 160.2 | | | | |

Peter H. Lindert; Jeffrey G. Williamson, "English Workers' Living Standards during the Industrial Revolution: A New Look," *The Economic History Review*, New Series, Vol. 36, No. 1 (Feb., 1983), p 11.

Note: The authors constructed the above cost of living index. It is based on a variety of price indexes for the period. They offer their own version as their "best guess" estimate of an average price index for the period, which they calculate as follows:

Percent change in prices
 1788-92 to 1809-15— plus 72.5%
 1809-15 to 1820-26— minus 27.3%
 1820-26 to 1846-50— minus 26.0%

Adult Male Average Full-Time Earnings for Selected Groups of Workers,
1755-1851, at Constant Prices



Peter H. Lindert; Jeffrey G. Williamson, "English Workers' Living Standards during the Industrial Revolution: A New Look," *The Economic History Review*, New Series, Vol. 36, No. 1 (Feb., 1983), p 12.

Note: Using the nominal full-time wage series, the authors then use the cost of living index to come up with the real wage trends in the table above. The authors argue that after a long period of wage stagnation, real wages nearly doubled between 1820 and 1850. This is a larger increase than previous optimistic studies produced.

The authors go on to discuss other indicators that might provide a more pessimistic interpretation of the standard of living for the workers, especially for the period 1780 to 1850. They discount the argument that the unemployment rate during the 1840s greatly diminished the standard of living for the working classes by calculating that the unemployed rate during the 'hungry forties' was probably less than 9.4% during the worst two years of this decade. They acknowledge that they do not have extensive data on the employment of women and children during the period but insist, based on the available evidence, that the "earning power of women and children marched roughly in step with the real wage of unskilled labouring men, a group with whom women and children tended to compete as substitutes" (p.17). The authors also note that the migration of workers, from countryside to towns, and from slow growing to fast growing regions, may also account for some of the growth of earnings for workers. They calculated that migration factors contributed less than 3.6% to the observed real wage gains between 1781 and 1851. The pessimists have long argued that the life expectancy of the workers declined during the first half of the 19th century, especially in the new industrial cities. The authors concede that

this may have been the case in Manchester and Liverpool but that “it can be shown that any tendency of the rising industrial centres to lure adult workers to an early death was fully offset, or more than offset, by the lengthening of life both in the cities and the countryside” (p. 21).

Finally the authors take up the argument of the pessimistic interpretation that the quality of life of the workers was degraded during the period by such factors as the long hours spent in tedious work under rigid discipline, the disruption of traditional family roles, industrial pollution, and the noise, filth, crime, and crowding of urban slums. They admit that they have not found a way of weighing these negative factors against the substantial gains in real wages. They note, however, that unskilled metal and cotton workers in the industrial city of Manchester earned £41.4 per week while in the agricultural area of “healthy” East Anglia, common laborers earned less than £25.1 per week. Yet, despite the higher cost of living in the industrial cities, and the supposed lower quality of life in the growing cities, many workers migrated from agricultural regions to industrial centers.

The authors conclude that the workers experienced impressive gains in the standard of living between 1781 and 1851. The real full-time earnings for workers during this period were: farm laborers 63.6%; all blue-collar workers 99.2%; all workers 154.8%. Subtracting such factors as occupational change, regional migration, a modest increase in unemployment, the shift to higher living costs for workers in industrial cities, a factor for urban industrial disamenities, the gains in the standard of living for the period were over 60% for farm laborers, over 86% for blue collar workers, and over 140% for all workers. Their evidence shows that the great majority of these gains came after 1820.

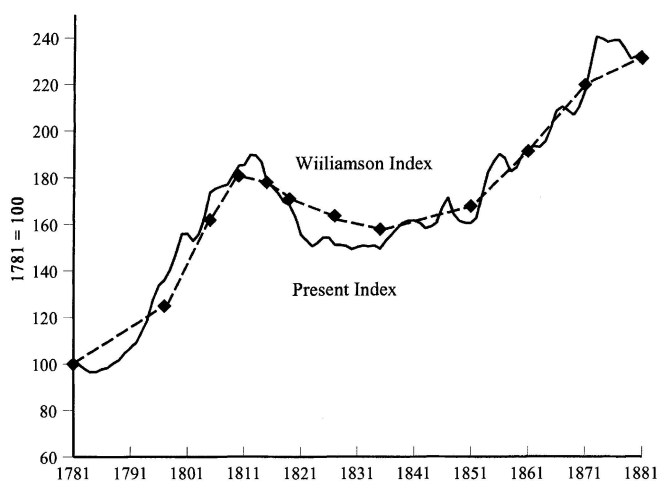
Peter H. Lindert; Jeffrey G. Williamson, “English Workers' Living Standards during the Industrial Revolution: A New Look,” *The Economic History Review*, New Series, Vol. 36, No. 1 (Feb., 1983): 1-25.

A Pessimistic View of the Standard of Living Debate according to Charles H. Feinstein

In a 1998 article Charles Feinstein offered a widely noted pessimistic interpretation of the standard of living in England and Wales during the period of industrialization between 1770-1880, in response to the more optimistic arguments of the 1980s. His focus was on the standard of living as shown by real wages and the potential private consumption of material goods and services by manual workers (blue collar). He excludes white-collar workers from his analysis. He does not take into account such factors as services provided by the state or improvements in the range of goods available to consumers during the period. He also does not include such quality of life issues as disease, crime, slum housing, pollution or the greater availability of urban amenities such as education during the period. Since there is no serious dispute among historians that the industrial transformation of society during this period incurred significant costs in many qualitative aspects of life, an interpretation that demonstrates a substantial improvement in real wages must be offset by the negative qualitative factors of urban life during the period. If, on the other hand, a study demonstrates little or no gain in material consumption, “then the pessimistic conclusion may stand, in the knowledge that it would only be reinforced by appropriate correction for the deterioration in the quality of life” (p.627).

Feinstein mentions a series of studies since the optimistic conclusions of Lindert and Williamson were published in 1983, which have cast some skepticism on their conclusions, including their own

downgrading of the rise of real wages for the period 1819 to 1859 from an average of 84% to an average of 62%. Recent studies of mortality rates suggest a substantial worsening during the early 19th century as life expectancy increased from about 37 years at birth in 1790, to 40 by the mid-1820s, and then stagnated for the next 50 years. Feinstein's more pessimistic argument is based upon the creation of new real wage and price indices. His new index of average real wages covers all manual workers, both male and female, from 1770 to 1880. Some of the components of Feinstein's indices rest upon the work of A. L. Bowley and G. H. Wood who carefully collected the data during the early decades of the 20th century. Feinstein constructed separate estimates for male and female employment at decennial intervals from 1771 to 1881. Annual estimates of the movements in earnings for more than 20 separate occupations or industries were then constructed, which account for some 80% of all wage earners in Great Britain. Feinstein's index of money wages is compared to that constructed by Williamson in the table below.



Indices of Money Earnings, Great Britain, 1781-1881, in Feinstein. p. 634.

Feinstein constructed a new cost of living index, which measures changes in the prices of 12 types of food as well as beer, coal, candles, clothing, footwear and rent. In order to determine the relative weights of expenditures in the cost of living index, he constructed the percentages allocated for three periods as shown in the table on the next page.

Feinstein then constructed a new cost of living index, see the next page.

Working-Class Expenditure Shares Used To Derive Weights For The Cost of Living Index,
Feinstein p. 635.
(percentage)

| Items | (1) 1788/92 | | (2) 1828/32 | | (3) 1858/62 | |
|--------------------------------------|----------------|-------|----------------|-------|----------------|-------|
| | Food | Total | Food | Total | Food | Total |
| A. Allocation of Total Expenditure | | | | | | |
| Food | | 69 | | 65 | | 61 |
| Rent | | 10 | | 11 | | 13 |
| Fuel | | 4 | | 4 | | 4 |
| Light | | 1 | | 1 | | 1 |
| Drink | | 10 | | 11 | | 12 |
| Clothing | | 6 | | 8 | | 9 |
| Total | | 100 | | 100 | | 100 |
| B. Allocation of Expenditure on Food | | | | | | |
| Bread | 20 | 13.80 | 25 | 16.25 | 30 | 18.30 |
| Wheat flour | 27 | 18.63 | 21 | 13.65 | 15 | 9.15 |
| Oatmeal | 13 | 8.97 | 7 | 4.55 | 3 | 1.83 |
| Potatoes | 5 | 3.45 | 7 | 4.55 | 10 | 6.10 |
| Beef | 3 | 2.07 | 4 | 2.60 | 5 | 3.05 |
| Mutton and lamb | 3 | 2.07 | 4 | 2.60 | 4 | 2.44 |
| Pork and bacon | 7 | 4.83 | 8 | 5.20 | 8 | 4.88 |
| Milk | 5 | 3.45 | 7 | 4.55 | 7 | 4.27 |
| Butter | 4 | 2.76 | 4 | 2.60 | 5 | 3.05 |
| Cheese | 3 | 2.07 | 3 | 1.95 | 3 | 1.83 |
| Tea, coffee | 3 | 2.07 | 3 | 1.95 | 3 | 1.83 |
| Sugar, treacle | 7 | 4.83 | 7 | 4.55 | 7 | 4.27 |
| Total food | 100 | 69.00 | 100 | 65.00 | 100 | 61.00 |

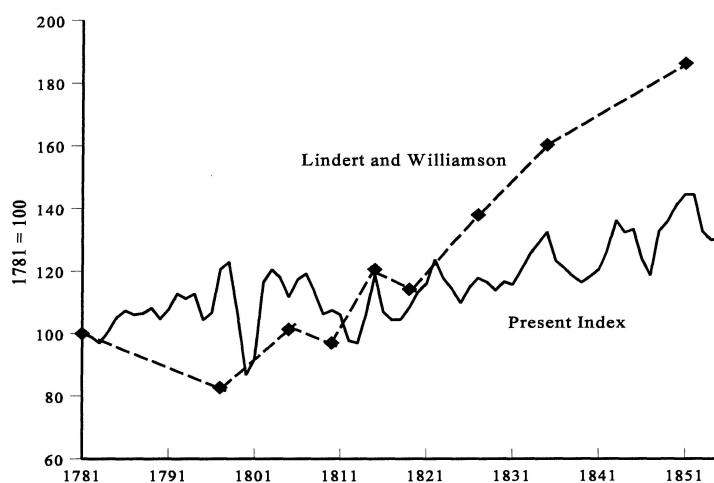
Cost of Living Index, 1770-1870
(Five year averages, 177/1782 = 100), Feinstein, p. 640.

| | (1) Food | (2) Rent | (3) Fuel | (4) Light | (5) Drink | (6) Clothing | (7) All items |
|-----------|-------------|-------------|-------------|--------------|--------------|-----------------|------------------|
| 1770/1772 | 97 | 100 | 90 | 96 | 100 | 98 | 97.4 |
| 1773/1777 | 100 | 100 | 92 | 96 | 100 | 99 | 99.3 |
| 1778/1782 | 100 | 100 | 100 | 100 | 100 | 100 | 100.0 |
| 1783/1787 | 99 | 100 | 92 | 101 | 100 | 99 | 99.1 |
| 1788/1792 | 102 | 101 | 98 | 102 | 100 | 96 | 101.4 |
| 1793/1797 | 127 | 107 | 105 | 113 | 100 | 96 | 119.2 |
| 1798/1802 | 172 | 117 | 118 | 131 | 116 | 102 | 153.7 |
| 1803/1807 | 163 | 122 | 134 | 141 | 141 | 100 | 151.1 |
| 1808/1812 | 204 | 141 | 148 | 164 | 143 | 102 | 181.8 |
| 1813/1817 | 195 | 146 | 147 | 151 | 154 | 105 | 178.6 |
| 1818/1822 | 156 | 139 | 130 | 123 | 154 | 93 | 150.9 |
| 1823/1827 | 146 | 128 | 124 | 91 | 140 | 81 | 139.2 |
| 1828/1832 | 142 | 141 | 117 | 88 | 126 | 71 | 135.1 |
| 1833/1837 | 126 | 164 | 108 | 83 | 114 | 75 | 126.2 |
| 1838/1842 | 147 | 186 | 101 | 90 | 114 | 70 | 140.2 |
| 1843/1847 | 136 | 192 | 105 | 82 | 114 | 64 | 133.4 |
| 1848/1852 | 117 | 201 | 95 | 79 | 114 | 60 | 121.5 |
| 1853/1857 | 150 | 213 | 116 | 104 | 120 | 66 | 146.6 |
| 1858/1862 | 135 | 228 | 112 | 99 | 129 | 73 | 140.4 |
| 1863/1867 | 134 | 250 | 129 | 87 | 129 | 90 | 144.7 |
| 1868/1870 | 137 | 268 | 126 | 90 | 129 | 76 | 145.8 |

Feinstein compares his index to that of Lindert and Williamson and finds a significant decrease in the fall of prices, especially after the Napoleonic war peak in prices. He finds that his index falls 37% from 1810/14 to 1849/51 (1.2% per annum) compared to the Lindert and Williamson cost of living index, which saw a decline of 51% (1.9% per annum) during this period. The major differences are a result of different weights assigned to particular expenditures and the addition of expenditures, such as potatoes, milk, cheese, oatmeal, drink and new series for clothing and rent.

Feinstein's new indices of full employment nominal earnings and the cost of living are then brought together to derive a measure of the trends in real earnings for manual workers in Britain. The result is shown below.

Indices of Real Earnings, Great Britain, 1781-1855,
Feinstein p. 643.



Feinstein concludes that there was a “moderate rate of improvement in full-employment real earnings” between 1781 and 1855. From the 1780’s to 1815, average nominal wages kept largely in step with the cost of living and thus there was almost no increase in average real wages. After 1815 there was slow progress but by 1855 average real wages were only 30% ahead of those in the early 1780s. “It was only from the late 1850s that the average British worker enjoyed substantial *and sustained* advances in real wages” (p. 643).

Feinstein points out that while the 60% increase in the standard of living found by Lindert and Williamson might have compensated for the many quality of life problems that developed during the period, his finding of a modest 30% increase was much less likely to do so. Moreover, he notes that we must also consider such issues as unemployment, the irregularity of work for many wage earners, and the underemployment of workers. Using an index of unemployment, he notes that the average rate of unemployment was about 5% from 1770 to 1815 and about 8% from 1815 until the 1850s. Feinstein also includes Ireland, which was excluded by Lindert and Williams. Taking into account unemployment, he produced an adjusted real wages index for the period 1770-1882.

Real Wages Adjusted for Unemployment,
Great Britain and the United Kingdom, 1770-1882
(Five-year averages, 1778/82 = 100), Feinstein, p. 648

| | (1) Full- Employment Real Earnings (Great Britain) | (2) Real Earnings Adjusted for Unemployment (Great Britain) | (3) Real Earnings Adjusted for Unemployment (United Kingdom) |
|---------|--|---|--|
| 1770/72 | 95 | 96 | 97 |
| 1773/77 | 95 | 96 | 96 |
| 1778/82 | 100 | 100 | 100 |
| 1783/87 | 101 | 102 | 101 |
| 1788/92 | 106 | 106 | 105 |
| 1793/97 | 109 | 108 | 105 |
| 1798/02 | 103 | 103 | 99 |
| 1803/07 | 115 | 114 | 109 |
| 1808/12 | 104 | 103 | 98 |
| 1813/17 | 105 | 102 | 97 |
| 1818/22 | 111 | 108 | 102 |
| 1823/27 | 113 | 111 | 104 |
| 1828/32 | 114 | 111 | 104 |
| 1833/37 | 124 | 121 | 113 |
| 1838/42 | 118 | 114 | 107 |
| 1843/47 | 126 | 124 | 118 |
| 1848/52 | 137 | 133 | 129 |
| 1853/57 | 129 | 129 | 128 |
| 1858/62 | 138 | 137 | 139 |
| 1863/67 | 143 | 143 | 146 |
| 1868/72 | 149 | 149 | 154 |
| 1873/77 | 167 | 168 | 176 |
| 1878/82 | 176 | 173 | 183 |

The net result of the inclusion of Ireland is negative for average real incomes for the United Kingdom as a whole until the mid 1830s, but this is reversed after this and, especially, after the famine. The net result of the inclusion of unemployment and Ireland in United Kingdom earnings for the period 1778/82 and the mid 1830s is an increase in real wages of only 13% for the United Kingdom and 21% for Great Britain. For the period of the mid-1830s to 1878/82 real earnings in the United Kingdom as a whole increased by 62% and 43% for Great Britain.

Feinstein's main conclusion is that "over the 75 years from 1778/82 to 1853/57 the increase in real weekly earnings, allowing for unemployment and short-time working, was less than 30%.... Wage earners' average real incomes were broadly stagnant for 50 years until the early 1830s...Some slight progress was made in the mid-1830s, but earnings then fell back again in the cyclical depression during 1838/42, and it was not until the mid-1840s that they at last started an ascent to a new height. More substantial gains were not achieved until the 1860s, and it was only after the post-1873 downturn in prices that average real earnings finally accelerated" (p. 649).

Feinstein notes that the picture looks even worse when we add additional factors such as the increasing adulteration of food and drink purchase by the working class and the increased number of dependents each worker had to support as fertility rose during the period. The number of dependents per worker rose from 2.61 in 1771 to 3.06 in 1821 and remained stable until the 1860s. Feinstein suggests that this may have reduced the increase in the standard of living by 10%. In addition, the decrease in quality of life issues resulting from rapid urbanization has been calculated by others, including Williamson, at perhaps a decrease of 3 to 8% in the overall average standard of living. Finally there was a decline of relief payments of about 40% after the enactment of Poor Law reform in 1834, which resulted in a reduction of average real incomes of about 2%. The combined effect of these factors reduced the improvement in the standard of living of the average working class family in the United Kingdom between the 1780s and the 1850s from about 30% to somewhere in the range of 10 to 15%.

Feinstein notes that his finding of a relative stagnation of living standards followed by a slow and modest improvement in wages fits with the reality of a growing population, added to by

Irish emigration to Great Britain, which produced an abundant supply of labor and kept down substantial real wage gains until the labor market began to tighten in the mid-1850s and 1860s until prices again declined after 1873. Feinstein concludes: “most British workers and their families did not experience an actual deterioration in their standard of living during and after the Industrial Revolution. But neither did they enjoy the rapid progress which the super-optimists have discerned. For the majority of the working class the historical reality was that they had to endure almost a century of hard toil with little or no advance from a low base before they really began to share in any of the benefits of the economic transformation that they helped to create” (p. 652).

Charles H. Feinstein, “Pessimism Perpetuated: Real Wages and the Standard of Living in Britain during and after the Industrial Revolution,” *The Journal of Economic History*, Vol. 58, No. 3 (Sep., 1998): 625-658.