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WAGES AND INCOME  
IN THE UNITED KINGDOM  
SINCE 1860

by

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## Introduction

This book is an attempt to bring into a coherent whole the investigations that I have made on the subjects of wages and income at various dates during the past forty years. Some of the more essential studies are out of print and others are not very easily accessible. Also as information has accumulated and additional analyses have been made, earlier estimates have been modified, and different classifications have been used for special purposes, so that some confusion might arise for anyone who wished to find my estimates over any long period. The plan often adopted of re-issuing in collected form a group of papers and essays did not appear to be suitable, or indeed practicable in view of the expense. The elaborate statistical tables, on which the results are based, are better left to the serious student who may be working at a special aspect of wage or price movements, and for his use a bibliography is included, by the help of which he can work back to the data and follow the technical processes of analysis; for, as in all fields of statistics, there is a special technique for analysing wages and another for measuring prices. When the originals are in Journals that are to be found in the usual Libraries, it has only been necessary to indicate the methods and to quote the results; but when the originals are out of print or in less obvious publications, more detail has been included in the text. It has not always been easy to re-examine and justify statistics which were handled thirty or more years ago, or to recover the exact classifications employed. Full detail can rarely be given in any reasonable space for statistics of this kind, and something depends on judgment and general knowledge of the material that cannot be completely justified in argument. Occasionally in using the earlier papers the clue has not been recoverable, and I have thought it better not to try to amend the estimate but to

give it with the tacit assumption that comparability had been preserved in the series given.

For the essence of these studies is not the obtaining of absolute totals, but the measurement of changes. Absolute totals depend on the definitions of such classes as income (individual and national), wages, earnings, unemployment, occupation, working and middle class, cost of living, standard of living, poverty. In each case there is an element of arbitrariness in definition or classification. In stating the numbers in the 'middle class', definition is reached by delimitation, as in the code-numbers of the Census, listed on p. 133. For national income it is necessary to state separately many items, and to choose which are appropriate for combination to correspond with this or that definition. But much of this difficulty is evaded in comparison. So long as precisely the same definition and the same classification are preserved, it is usually indifferent on which side of a line relatively small marginal quantities are placed; the rate of change is hardly affected. More important is the consideration that while very varying estimates may be made by different investigators for one date, the change shown over a period is definite if the method and classifications are the same throughout it. Very important illustrations of this principle are to be found in wage and also in price statistics.

In the end our results can be only approximate, however exact our definitions. Very often there is no information about some integral part of a total. For example, in estimating aggregate wages or earnings we know almost nothing about the payments to shop assistants or to resident or non-resident domestic servants. In total income there is a gap between those who are assessed to income-tax and wage-earners which can only be filled over long periods by hazardous interpolation. The fitting in the sporadic information that exists on such subjects is a matter of judgment rather than one of arithmetic. We can only proceed, if we can ascertain the maximum disturbance that variance of such estimates can have on our results. It is ridiculous to give any of the major totals to several digits, as if they

were known to one part even in a thousand.<sup>1</sup> Estimates should always carry with them an indication of the margin of uncertainty to which they are subject. Sometimes such a margin can be fixed because there are estimates on alternative bases and by different investigators, as the National Income can be built up either from production or from income statistics, with resultant differences of perhaps 10 per cent. The situation is rather different when the results are in the form of index-numbers. They may be expected to be accurate, within their definitions, within 1 or 2 per cent. over short periods, say of five years, if the changes have not been too sudden or abnormal; over longer periods the errors may be cumulative, and it may be proper to allow a 10 per cent. margin. But they serve an important end if they allow us only to show the dates of change, to state that the thing measured was greater or less at one period than at another, and to distinguish violent fluctuations from slight oscillations.

In a summary book of this kind it has not been possible, or even desirable, to exhibit much detail or analysis of the accuracy of the sources, which are to be found in the originals. Where necessary an indication is given of the margin to be assigned to the estimates. The more technical matter and the collation with former estimates are relegated to the notes in the Appendices.

In revising former work the opportunity has been taken of bringing some of the series up-to-date, so that the wages include the results of the 1935 enquiry, and wage and price index-numbers continue to the end of 1936. I have not attempted, however, an estimate of National Income since 1924, but only given some of the more important constituents in subsequent years.

At one time I thought of giving this work the more ambitious title 'The Condition of the People', which was the nominal subject of the Marshall lectures given at Cambridge in the autumn of 1935 and incorporated to a considerable extent in the

<sup>1</sup> In preliminary working and even in the final tables it is often convenient to keep more digits than are ultimately justified.



subsequent chapters. Another possible title was 'Progress of the Working Class'. On reflection neither seemed to be suitable. The word Progress prejudices the results; it might be that there was retrogression. Also the idea of progress is largely psychological and certainly relative; people are apt to measure their progress not from a forgotten position in the past, but towards an ideal, which, like an horizon, continually recedes. The present generation is not interested in the earlier needs and successes of its progenitors, but in its own distresses and frustration considered in the light of the presumed possibility of universal comfort or riches. The standard of living may rise considerably, but only over a long period; its change is not perceptible to a growing generation, which knows that its own means are insufficient for its desires.<sup>1</sup> The Condition of the People implies that 'the people' are a class within the nation, while one of the main changes, shown by the statistics and otherwise evident, is that lines of division are being obliterated, and there is a continual graduation from the poorest to the richest both in wealth and habits. More important is that on the statistical side there are many measurements of health, attention to social services, education, crime and other subjects, such as are considered for example in *The New Survey of London Life and Labour*, which I have not specially studied and have not dealt with in the sequel; and also many incommensurables, such as advantage of leisure, the increasing urbanisation of the population, the varying intensity or disagreeableness of work, the increasing variety of entertainment and facilities for travel, all of which are germane to the description of the well-being of the population. On the plea that the pedestrian statistician should stick to his last, this work is confined to the measurable framework within which the pursuit of happiness takes place.

In 1886 Giffen read to the Statistical Society a paper entitled

<sup>1</sup> 'My plight is, alas, worse for—I cannot lay hands on more than £500 (per annum), and that in this country spells mere existence, if that.' Quoted in the *New Statesman* from a letter to *The Times*, in the autumn of 1935.

'Further Notes on the Progress of the Working Classes'; he says: 'I doubt whether much could be added to the triple and quadruple chain of evidence by which the great progress of the working classes in the last half century is proved. The great rise of money wages among labourers of every class, coupled with stationary or even falling prices of commodities on the average, the all but universal shortening of hours of labour, the decline of pauperism, the enormously increased consumption of the luxuries of the masses, the improvement in the rate of mortality—these and other facts combine to prove that there has been a great general advance in well-being among the masses of the community.'

And again: 'The general conclusion from the facts is, that what has happened to the working classes in the last fifty years is not so much what may properly be called an improvement, as a revolution of the most remarkable description. The new possibilities implied in changes which in fifty years have substituted for millions of people in the United Kingdom who were constantly on the brink of starvation, and who suffered untold privations, new millions of artisans and fairly well-paid labourers, ought indeed to excite the hopes of philanthropists and public men. From being a dependent class without future or hope, the masses of working men have got into a position from which they may effectually advance to almost any degree of civilisation. . . . The working men have the game in their own hands. Education and thrift, which they can achieve for themselves, will, if necessary, do all that remains to be done.' Quoted from *Essays in Finance*, Second Series, pp. 409 and 473 (ref. 75).

No doubt the condition of 'the masses' in 1836 was deplorable in the extreme. But was the level implied by these words in 1886 one that we should now contemplate with equanimity? Three years after this paper was read Booth began his *Survey of London Life and Labour*, and found that one-third of the working class was below his poverty line—a line which is now regarded as a very undesirable minimum.

Would a repetition of Giffen's words give a true account for the further half-century that has elapsed since he spoke them?

In a large measure the answer is yes. Wages have increased more than have prices. The rise in the fifty years has been greatest in the classes where improvement was most needed. Hours of labour have greatly diminished; the so-called masses consume more of what Giffen termed luxuries (sugar, tea, tobacco), and have a greatly increased variety of amusements, many of them of recent invention, on which the increased margin of income over necessaries can be spent. The rate of mortality has progressively fallen till there seems to be little room for it to fall further. Pauperism in his sense is no longer an adequate measurement of poverty. His paupers, which amounted in 1881 to 31 per thousand of the population, have been replaced by 'persons in receipt of Institutional or Domiciliary relief'. These were 33 per thousand of the population of England and Wales in 1935, but the very great majority of these, 29, had 'domiciliary' relief, due to unemployment, a subject with which Giffen did not deal. There are new millions of well or 'fairly well-paid' artisans and labourers, that is, well paid on the standard current fifty years ago. Their representatives state in their election programmes that if 'the game' is put into 'their hands' the people can 'effectually advance to a much higher degree of prosperity'. But though many of the working class are well educated (in comparison shall we say with the middle class) thrift is not a conspicuous part of their programme.

The subsequent chapters show statistical details of some of the changes in the past fifty years. Before summarising them it may be well to look back to a rather earlier period, for which statistics are incomplete but sufficient to show the tendencies. Mr G. H. Wood's estimate of average wages from 1850 (ref. 86) shows a rapid rise in money wages from 1853 to 1855, induced by the high prices of the Crimean War, and more than neutralised by their rise. After some relapse a further rise in money wages began after 1858 and continued with little interruption till its culmination in 1874. Prices were also rising, at

some dates sharply, in this period, so that there was a set-back in real wages from 1865 to 1868. From 1874 to 1879 prices fell fast, and wages at nearly the same rate. Wood's figures for *real* wages (ignoring changes in unemployment), the basis of which is explained below (p. 123), give for the approximate dates of maxima and minima and some other years:

1850	100	1867	109
1855	95	1876	137
1861	100	1880	134
1864-5	117	1886	151

Thus Giffen's contention of considerable progress is supported for at least the latter half of his period.

The basic point for this book is chosen as 1880, by which date the figures are sufficient for fairly precise statements. It also falls within a short period during which the changes of wages and prices were small. Then three periods are studied: 1880 to 1914, 1914 to 1924, and 1924 to 1937. The essential estimates of the movement of wages and prices are given in index-number form in the table on p. 30.

As regards the first period, it will be seen there that money earnings rose throughout the thirty-five years, with slight relapses in 1884, 1900-2 and 1908, together with periods of stationariness. Over the whole the average increase was nearly 1 per cent. per annum. The 'cost of living' fell with some interruptions from 1880 (and indeed from 1873) to a minimum in 1895-6, and then rose with one set-back till 1907, reaching approximately the level that was recovered, after a slight fall, in 1914. When we make the familiar, but rough, estimate of the movement of real wages by applying the cost of living index to the wage-index, we obtain a sequence of quite a different character. Real wages are seen to rise rapidly from 1880 to a temporary maximum in 1895-6, increasing by some 40 per cent. in fifteen years, and then to oscillate about that maximum for nearly twenty years. Since it is doubtful exactly at what dates in the 'nineties prices were effectively at their minimum, it might be as accurate to date the end of the rise of real wages at

1899. Wholesale prices at least rose rapidly during the South African War, and it is doubtful what is the correct measurement for real wages from 1898 to 1902. There seems to be no doubt that, except for the years of the brief crisis of 1907, there was no significant change in real wages in the thirteen years before the Great War. The full examination of the causes which led to this change of tendency, from generally rising real wages for the great part of the second half of the nineteenth century to stationariness in the twentieth, calls for more research than it has received. It should be added that if we had not allowed for some shifting of occupation towards higher wages, we should have found a definite fall in real wages after 1902.

It is argued in Chapter VI that the income per head of the whole population followed nearly the same course as money wage-rates, throughout the thirty-five years, and when allowance is made for the changes of prices the same general movements are found in both the main sections of the National Income.

No estimates are here attempted for the years *between* 1914 and 1924. The course of wages and prices from 1914 to 1921 is discussed elsewhere (ref. 51). A great deal of doubt must remain about the movements of average wages and the actual cost of living, though there is copious detail for many of the items. A very serious attempt, however, has been made to find the net result of all the changes from 1911 or 1914 to 1924, a year in which conditions were temporarily stable. It is found that average money earnings for those in full work had increased about 94 per cent., and that the gain in real wages was about 10 per cent. At the same time hours of work had generally been decreased by some 10 per cent. This increase was partly at the expense of income from property, for the whole national income per head is estimated to have risen no faster than prices—not so fast if the diminution of income from abroad is taken into account. But this statement depends to some extent on what definition of income is used, and it is explained in Chapter VI.

After 1924 prices fell rapidly to a minimum in 1933, and then took an upward turn, which has continued to the date of writing (1937). Money wages began to fall later, from 1926, and fell much more slowly than prices, so that real wages rose some 18 per cent. on the average—the exact rise is a matter of conjecture or even of definition, because, as discussed in Chapter II, the measurement of purchasing power by the cost of living index-number has become less satisfactory as real average wages have increased. Since 1933 the increase of money wages appears to have lagged behind that of prices. It has generally been the case, as indeed we should expect *a priori*, that real wages fall for some time when prices rise and rise when prices fall. The stationariness of money wages is no new phenomenon. These tendencies are modified if we take unemployment into account, for that rises after a crisis when prices break, and falls when prices recover.

The division of income into the classes 'arising from property' and 'arising from employment' has considerable importance, but it is blurred by the existence of income from direct work for gain—'working on own account'—which may contain a small or large constituent properly attributable to property, small in the case of an itinerant knife-grinder, large when a firm operates on its own capital. On the other hand, the division of income from employment into wages and salaries is artificial if it merely depends on the method or contract of payment, and is a matter of delimitation rather than of principle if it depends on occupation. It is certainly not reasonable to regard wage-earners as producing the wealth of the nation, and all other classes as parasitic, as is sometimes implied. But the manual working class is sufficiently distinct even now to have characteristics of its own, and has a certain class consciousness, and the proportion that wages form of the total national income has often been the subject of estimate. This proportion is estimated from various points of view in Chapter VI. When the same items are included, and we deal throughout with aggregate income, or with home-produced income, or with social income,

in the phraseology of that chapter, it is remarkable that we get very nearly the same percentage, 40 to 43, according to the definition of income, from 1880, or even from 1860, to 1935. There have been temporary variations of two or three point up or down, and the direction of such small changes has some times depended on which definition of income we take, but it appears to be impossible to establish the existence of any permanent tendency to alter the proportion.

This approximate constancy is the more remarkable in view of the fact that the manual-labour class has formed a proportion of the occupied population that has diminished since 1880. According to the classification used in the text it was 80 per cent in 1880, 74 per cent. in 1911, and 72 per cent. in 1931. The smaller relative numbers have obtained the same relative amount

The increasing number of persons engaged in clerical, professional and other middle-class occupations is analysed in Appendix E, pp. 127-36. The proportion of men so employed increased moderately from 1881 to 1911, and has since then remained nearly stationary. The proportion of occupied women and girls in such occupations increased rapidly throughout the period, and especially between 1911 and 1921, when the entries to domestic service fell off, and the number of typists, clerks and shop assistants became much greater.

When we are considering the progress of the working class we should have regard to the fact that, especially since the introduction of compulsory education, there has been a transfer of the more intelligent, at least in book knowledge, from manual labour to clerical work, teaching and other professional occupations. The existing middle class must be very largely recruited from the children of working-class parents or grandparents. In fact, the recent London and other town Surveys have shown that in households in which the head is an artisan, or even labourer, the children are frequently typists, clerks, shop

<sup>1</sup> Mr Clark, with a different definition, obtains a different percentage, but, over the period from 1924 which his studies cover, constancy is still marked (ref. 70).

assistants or teachers, while others follow their father's occupation. Especially among young women there is an increase of earnings with each grade of education; for men the wages of skilled workmen overlap the smaller salaries. It is not practical or reasonable to construct an average of the earnings of workmen fifty years ago, and compare it with the average of wages and salaries of their descendants now; no doubt the latter average would be raised above that of wages alone, but not very significantly. But together with any statement of the change (or constancy) of the proportion that wages form of the national income, we should have figures showing the synchronous increase in the number of at least the lower range of salaries. The structure of commerce and industry has altered in the direction of more administration in relation to manual work.

Though it is not practical to give a series in which wages are combined with small salaries, it is attempted to trace the relation between earned income as a whole and income from property. Such estimates are discussed in Chapter VI. The data are rather unsatisfactory, and there is a permanent difficulty, as named above, in defining or measuring earnings of those who use their own capital. The general result is that on any constant definition and method this proportion has changed very little. It is of course not possible that the wage proportion should be constant, and the property proportion also constant, while the salary proportion increased. But the variations, as shown, for example, in Table XV, p. 99, have usually been slow, and the changes tend to be submerged in the difficulties of classification.

All such problems have become increasingly difficult to handle because of the enhanced amount taken by taxes and rates, for interest on the national debt and for social services. The income received is not all available for free expenditure. Interest is largely a transfer from one group of taxpayers to another. Of the sums devoted to social services some are direct transfers, as for example non-contributory old-age pensions, some are for common public purposes, some are for the relief of want or sickness, some are subsidies to selected industries.



Even if the final incidence of taxes and rates could be traced, it would still not be possible to allot a particular tax or rate to a particular service, for all taxes are pooled in the Public Accounts and a considerable amount of the receipts of taxation is transferred to the aid of rates, or shares expenses with rates. We cannot reasonably say, for example, that receipts from income tax, sur-tax, and estate duties are allotted to debt-interest and defence, because in 1935-6 the first total is nearly equal to the second, while the receipts from beer, tea, sugar, entertainments and tobacco pay for expenditure under the heading 'Health, Labour and Insurance', while the customs and excise on spirits meet three-quarters of central expenditure on education. All that can be done from the point of view of avoidance of duplication in national income estimates is to show the relevant statistics, and work out any proportions on different reasonable hypotheses. These questions of definition are not discussed in this book, and only those statistics of transfers are used which are included in the studies from which the estimates are drawn.

The increase in real wages has at no time in the past forty years been rapid. Up to the date of the war there had been no progress for fifteen or twenty years. Over the war period the increase in the average money wage would have been no greater than the rise of prices, if there had not been a shifting of occupations and methods of payment. Since 1924 the rather considerable rise has been because prices have fallen faster than wages. These movements are not enough to account for the progress that is evident to any one who has observed the wage-earning classes during the period. The development of social expenditure, whatever the source of the money, has through old-age pensions and the many insurance services been an enormous help in preserving the standard of life attained by any family; the special increase in the lower rates of wages has levelled up these standards. There has in forty years been a great advance of knowledge, as the younger generations have matured in an environment of more general education. The reduction of the

hours of work in 1919-20 has had far-reaching effects. To this should be added the reduction of stringency in making the income meet necessary expenses, due to the smaller number of children in almost every section of society. Unfortunately this amelioration is not to be found in those districts and industries where unemployment has been prolonged and wage progress has not been uniform, so that some groups have had exceptional good fortune, while others have barely preserved their standard. Since this book is limited to measurable aspects of change and principally to general averages, it does not afford the material for the description or complete study of the changing 'condition of the people'. It may, however, serve as a companion to the numerous local Surveys which are now available, and provide some historical background for modern investigators.

## Bibliography

The following lists contain the titles of nearly all the books and articles which I have written, separately or with colleagues, on the subjects of wages, prices or income. Not all of them have been referred to directly in the text.<sup>1</sup> The second part gives the exact references to the works of other authors to whom reference is made; it does not in any way claim to be a complete bibliography.

The principal sources of information are in official publications, which are named in the text as they are used.

<sup>1</sup> The opportunity is taken for making two corrections :

In *National Progress* (ref. 43), p. 13, last line, average wages in 1901 are stated as 27s. 6d.; it should be 26s. 6d. and the date 1902. The increase over 1881 should be 24, not 29, per cent. The mistake arose from a miscopy in the arithmetic.

In *National Income, 1924* (ref. 47), on p. 21, table col. *d*, the first entry should be 1820, not 18200, and the consequent corrections should be made. This has no serious effect on the sequel.

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- 2-15. *The Statistics of Wages in the United Kingdom during the last hundred years*
2. 1898. Part I. Agricultural Wages.
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10. 1902. Part IX. Wages in the Worsted and Woollen Manufactures of the West Riding of Yorkshire.

*With* GEORGE H. WOOD

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See also 87, below.

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