IV

The analysis has thus far concerned itself with Great Depression phenomena as they exhibited themselves in the years 1873 to 1886. The subsequent period which falls within the Great Depression has been omitted largely for purposes of analytic convenience; but the behaviour of the British economy virtually to the eve of the Boer War may be regarded as dominated by the secular forces of the Great Depression.

The cyclical expansion from 1886 to 1890 constitutes a break in the trend pattern; but a meaningful break. The downward movement of prices, from 1873 to 1886, was traced to a relative cessation of foreign lending: their rise to 1890 is closely connected with a revival of foreign lending. In its initial stage a revived export demand from both North and South America contributed to the expansion. In the latter stage (1888–90) South America was the dominant feature in both the long-term capital market and in the expansion of commodity exports. It was activity in this direction which distinguishes the boom of 1886–90 from that of 1879–83; for, aside from the South American adventures, the other bases of revival were much as they had previously been: a variety of internal developments, associated with joint-stock formation and ship-building. Reports from the engineering, iron, and steel trades indicate the extent to which the margin of prosperity which lead to rising prices was dependent, over the final years of expansion, on the export trade to the developing South American areas. The role of exports in the boom of the late eighties, as compared with the early years of the decade, is indicated in the following figures for the value of exports:

	Value of Exports (1900=100)
1880:	80·8
1883:	86·2
1887:	79·4
1890:	92·6

With the home market strong, and with the added impetus of expanding exports, the heavy industries reached a position of nearly full employment in 1889–90. The coal industry, for the first time since the early seventies, approached a stage

where fairly serious inelasticities in supply appeared. The coal boom was not on the extraordinary scale of 1871–3, but it was sufficient to colour cost-price relations throughout the capital-goods industries.

That prices rose as little as they did during these years (from 92 to 96, 1886–90, as compared with 132 to 148, 1868–73) can be attributed in substantial part to the persistence of the cost-reducing investment which had dominated the scene since 1873. The net result of the shifting of supply and demand curves in each market was, broadly, in the direction of higher prices, in the late eighties. But there was no cessation of the technological development which had distinguished the previous fifteen years. The engineering reports still contain an impressive series of cost-reducing innovations. At the same time expansion in scale was proceeding, both within Britain, and in foreign countries. Although much of the joint-stock floatation which took place at this time involved merely a conversion from private to corporate ownership, the actual construction of new plant was on a scale to be counted an important stimulus to production in the capital-goods industries. The consequences of these shifts in long-period supply conditions were quickly evident when the various lines of new investment, at home and abroad, weakened in 1890, and expectations altered.

The Great Depression was back again strongly from 1890 to 1894. Prices fell, and the existence of some unemployed resources lead to bitter competition, at home and abroad. Affected groups again clamoured for redress, by monopoly arrangement and tariffs. The colonies again loomed as a saving possibility. But the underlying forces making for industrial advance were so strong that production fell off but slightly. Testimony to the technological advance of the previous and concurrent years are the following figures, which compare 1890 with 1895, the first year of cyclical revival:

	Unemployment per cent.	*Total production (1900 = 100)*	*General prices*
1890 . .	2·10	85·8	96
1895 . .	6·00	87·7	83

In each market the inverse or disproportionate movement of production on the one hand, and prices and employment on the other, can be traced to changes in cost and supply conditions. A significant change on the side of demand, the increased severity of international competition, was also a product of these expansionary forces. In the nineties there were at least three major industrial powers; Britain did not face a monopolist's demand curves for capital goods. That did not mean a fall in British output; for the world economy was expanding. It did mean, however, increasingly severe competition, and, in cyclical depression, rapidly falling prices.

The relatively high level of output maintained can be traced, as in other cyclically depressed years in the Great Depression, to the maintenance of a considerable volume of home investment. Ship-building, despite the tremendous expansion of 1888–90, did not lapse fully into the expected depression. New and special types of steamers were needed, and regarded as profitable, for the growing Atlantic passenger trade, and for the carrying of fruit and meat. These were the years when Manchester rapidly carried forward the building of the ship canal. Builders, too, remained abnormally active, with average unemployment well below the general average:

	Unemployment per cent.	
	General average	*Carpenters and joiners*
1890 . .	2·1	2·2
1891 . .	3·5	1·9
1892 . .	6·3	3·1
1893 . .	7·5	3·1
1894 . .	6·9	4·3

At no time did the engineers, despite the loss of South American orders, suffer more than a relatively mild recession. In this they were aided by one type of foreign investment, which had continued on an important scale: mining, in South Africa and Western Australia.

Gold-mining had been, of course, a significant but minor

feature of the expansion reaching its peak in 1890; and gold was pouring into the central banks of the world. Whatever factors produced the Great Depression phenomena of the nineties it was not a lack of gold, inhibiting the supply of short-term loanable funds. Cheap money, as in other stages of this secular period, did, however, encourage various modest types of home investment. This was a time when local governments found it advantageous to enter the market, when one after another existing issues were converted at lower rates.

The expansion in general activity that ran from 1894 to the latter half of 1898 falls fully within the Great Depression. Home investment rose; the yield on Consols fell; commodity prices remained relatively steady; unemployment came down to about 2 per cent. The rise in exports was spread fairly evenly over the complex of British markets; and capital exports were lower in 1898 than they had been in 1894. These were years dominated by industrial investment, largely within Great Britain. A bicycle boom was about the most exciting new enterprise the City could offer the investor. But the Spanish–American War came in 1898, and the Boer War in the following year. Joseph Chamberlain was in the Colonial Office; and the British economy was on the eve of a new secular phase.

V

It is thus concluded that the central causal force in the Great Depression was the relative cessation of foreign lending. In less precise terms the period might be entitled 'What Happened when the Railways were Built'.[1] Of course, railway-building went on, but never in these decades on a scale sufficient to dominate the British capital market and capital-goods industries. Savings moved into other channels—channels less profitable to the investor. The expectations of 1871–3 had encouraged great expansion of plant. Cheap money, new invention, and the need to reduce costs carried

[1] For the decisive importance of the end of railway-building in another context, see R. Pares, 'Economic Factors in the History of the Empire', *Economic History Review*, 1937, pp. 139–40.

on the process in the decade that followed. The expected marginal efficiency of capital declined.

The whole economic system conformed to the theoretical consequences of this process. There was no increase in the supply of labour, comparable to that of capital, and money wages fell but slightly. Reduced prices brought the benefits of increased productivity to the working man. Wealth was redistributed favourably to labour, despite the introduction of much labour-saving machinery.[1] The Stock Exchange was slack. It was forced to perform the process of revaluing downward the capital equipment of the community, as its quasi-rents declined. Business men were harassed with falling profit margins and increasingly severe competition. Everywhere they began to search for an escape—in the insured foreign markets of positive imperialism, in tariffs, monopolies, employers' associations. None of these trends advanced far in the Great Depression. But they were symptoms of the central ailment. The capitalist was to have a last fling at a rising interest rate in the capital export boom of the decade before the war.

The irritations of the declining yield on capital which accompany intensive investment were to reach a much greater intensity in the period 1919–39. In the Great Depression, however, there were still outlets for enterprise that yielded a rate high enough to entice the private lender. The Government was not then forced to assume the role of compensatory monopolist in the capital market; but the lines of future development were clearly forecast. The mid-century blandishments of the profit motive had begun to lose their force.

[1] See below, Chapter IV, pp. 103–7.

IV

INVESTMENT AND REAL WAGES, 1873–86

I

In Chapter III the economic characteristics of the Great Depression are explained as stemming from the changed direction of investment in Britain, at a time when the quantity of investment was sustained. Capital export, principally for the construction of railways, fell off severely, and was supplanted as the principal source of employment by various types of intensive domestic investment. Rates of interest, profit margins, and prices fell; money wages fell less than retail prices. This rise in real wages resulted from a process of capital refinement.

It was a situation where doses of capital were being applied to a relatively fixed quantity of labour.[1] The consequence was a rising marginal productivity for labour, a falling marginal productivity for capital. But real wages are not paid in kind. Nor are they directly or automatically associated with physical marginal productivity. The process can be considered automatic only under the assumptions of perfect competition, and even then requires the intermediary of markets: in this case markets where the prices of goods fall more rapidly than the prices of labour. This chapter will attempt to investigate how, in this period, money wages remained constant or fell slowly, while retail prices declined more rapidly.

The general conclusion that real wages were rising is supported by a *per capita* index of food consumption:[2]

(*All figures 1900 = 100*)

	Money wages	*Retail prices*	*Real wages full work*	*Real wages allowing for unemploy.*	*Consumption index*	*Wages bill*
1868	72·6	133·7	60·1	56·4	66·0	47·9
1873	86·6	137·1	69·9	70·9	77·0	68·3
1879	81·6	115·7	74·9	67·6	74·3	60·6
1883	83·2	114·6	76·0	76·0	78·9	66·2
1886	82·7	103·4	82·5	76·0	76·3	62·0
Average 1870–5	86·6	130·8	68·9	69·2	73·8	61·4
Average 1880–5	82·7	115·3	76·2	73·7	76·9	64·0

For notes 1 and 2 see opposite page.

It is clear that the extraordinary gains of 1868–73 were not only maintained in the decade that followed, but slowly increased. The annual average increase in real wages provides a rough measure of labour's relative progress during the three periods comprising the sixty-four years before the war. These figures, of course, do not take into account the benefits of shorter hours or improved social services:[1]

(*1850 = 100*)

	Annual average increase in real wages, full work	*Annual average increase in real wages, allowing for unemployment*
1850–73 . .	+1·17	+1·30
1874–1900 . .	+2·04	+1·85
1901–14 . .	− ·93	− ·71

Contemporary opinion, as reflected in the pamphlet literature, in trade reports, and in responses to the questions of royal commissioners, agreed that labour's position, aside from cyclical and frictional unemployment, was improving:[2]

'There is no feature in the situation which we have been called upon to examine so satisfactory as the immense improvement which has taken place in the condition of the working classes during the last twenty years . . . wages have not fallen to any great extent, the hours of labour are shorter, and most of the necessaries of life cheaper. . . . Those who may be said to represent the producer have mainly dwelt upon the restriction and even

[1] These figures were arrived at by the simple process of dividing the total net change in each period by the number of years contained in it. Compare these measurements with the calculations by annual average percentage rate of change, Chapter I, Table I.

[2] *Final Report, Committee on Depression* (1886), pp. xxi, xi, and xv. For an extended discussion of the relative level of unemployment in the Great Depression, see above, pp. 47–50. Layton and Crowther's conclusion (op. cit., p. 95) is: 'Looking at the whole period (1873–96) there seems to be no evidence that employment was less regular than in previous periods.'

Notes 1 and 2 of opposite page.

[1] The reader may wish to consult the Appendix, for a discussion of Mr. M. Kalecki's approach to the problem of income distribution in the period 1880–1913, a portion of which bears on the subject-matter of this chapter.

[2] W. Layton and G. Crowther, *An Introduction to the Study of Prices*, pp. 265–6, give G. H. Wood's wage calculations; A. C. Pigou, *Industrial Fluctuations*, pp. 387–8, Wood's index of *per capita* consumption; Pigou, loc. cit., pp. 383–4, A. Bowley's estimate of the wages bill, allowing for unemployment.

the absence of profit in their respective businesses. It is upon this class, and more especially from the employer of labour, that the complaints chiefly proceed. On the other hand those classes of the population who derive their incomes from foreign investments, or from property not directly connected with productive industries, appear to have little ground of complaint; on the contrary, they have profited by the remarkably low prices of commodities . . . a similar remark will apply to the labouring classes.'

Although the Great Depression years had their share of unemployment, the period would not have been thus named if labour's viewpoint alone were considered. It was a falling yield on capital which called forth royal commissions. The trades unions could pursue a relatively passive policy, strikes were rare. It was estimated that average hours of work had fallen three to four hours per week in the fifteen years before 1886.[1]

The social historian and reformer find much that was deplorable in working-class life of the seventies and eighties. Using less absolute measures of welfare, the economic historian, viewing the Great Depression in relation to the years which preceded and followed (1896–1914), sees considerable relative progress peacefully achieved. In many ways the economic environment favoured labour; certainly more so than the difficult pre-1914 decade.

We shall here first examine the market conditions for labour and retail commodities, attempting more specifically to trace the supply and demand conditions which produced slowly falling money wages, a rapidly falling cost of living, a favourable turn in the terms of trade. These phenomena will be linked where possible to the investment of 1873–86 and to the boom which preceded (1868–73). Some effort will then be made to explain the changed distribution of income in terms of current wage theory.

[1] *Final Report, Committee on Depression* (1886), p. x. Three typical examples from the *Third Report* (pp. 299 and 307) are the following: Hours per week fell from 59 to 54 in the Palmer's Shipbuilding and Iron Co., from 60 to 54 in the Jarrow shipyards, from 61 to 54 in the New Castle Chemical Works.

II

Major changes in the total volume of labour supply have no great causal significance in the Great Depression. The population had been increasing at an accelerated rate from 1855 on, and it is evident that by 1885 an increase in younger men on the labour market must have resulted. But this development had no striking consequences traceable in the reports or the statistics:[1]

	Population of Great Britain (in millions)	*Increase in population (per cent.)*
1845 . . .	27·8	—
1855 . . .	27·8	—
1865 . . .	29·9	7·6
1875 . . .	32·7	9·4
1885 . . .	36·3	11·0

It is difficult to generalize about changes in the manner in which the supply of labour may have responded to changes in wages and working conditions, i.e., in the shape or position of the labour supply curve. Two relevant facts, however, can be established. After the crisis of 1873, entrepreneurs successfully applied pressure in an effort to eliminate the inefficiency which prosperity wage rates had engendered. Especially in mining, but in other trades as well, there is no doubt that entrepreneurial watchfulness in the face of falling profits caused an increase in man per hour labour efficiency—this quite apart from economies achieved through the introduction of new equipment. The destruction of restrictive trades union regulations relating to apprenticeship, piece-work, and shop routine, is symbolic of the trend.[2] A counter-

[1] Ibid., p. xxxii. W. Beveridge, *Unemployment*, 1930, pp. 458–9, estimates that the 'supply of labour' increased from 7·135 million in 1871 to 7·747 million in 1881.

[2] 'Review of 1874', *Economist*, pp. 1–2: 'The almost universal excitement of 1871–2 had thoroughly disorganised both labour and commerce. The working people became intoxicated and unmanageable under rapid advance of wages, and rapid diminution of the hours of work; and the excessive profits of the coal, iron, shipping, and some other trades introduced into ordinary business a degree of recklessness which can only end in mischief. The reduced demand for labour has not only brought down wages, but it has also put an end to many of the rules adopted, under pressure from the trades unions since 1871, directed to limitation of hours of work, abolition of piece work, restriction of the number

movement, however, was the almost universal tendency to shorter hours. The Nine Hours' Bill in the coal industry was typical of a movement which, in the course of fifteen years, cut three to four hours off the average working day. The extent to which this reduction in hours was balanced by an increase in efficiency (from the shorter day) and increases enforced by sharp-eyed foremen one can only guess. The verdict of the Royal Commission was that 'both the quantity and the quality of the work produced have largely increased. [Referring to longer hours and lower wages abroad.] The workman in this country is, when fully employed, in almost every respect in a better position than his competitors in foreign countries, and we think that no diminution in our productive capacity has resulted from this improvement in his position.'[1] Weighing trends in population and efficiency one can conclude that the general labour supply curve shifted slightly to the right.

At the same time, a falling price level and an end to conditions of full employment probably made the curve somewhat less sensitive to small reductions in wage rates. After the initial post-boom difficulties of adjustment, strikes were rare. Retail price movements were steadily revising upwards the value of a given money wage. An unseen hand (invisible, for example, among labour supply and demand curves in the coal and iron industries) was changing the real value of wage bargains. Labour as a whole could afford to accept gracefully such small wage reductions as competitive conditions occasionally allowed the entrepreneur. This was the Lib-Lab era.[2]

of apprentices, etc. In many trades these prohibitions, if persisted in, would have been fatal. The working classes are now learning by the sharpest and rudest experience that combinations among themselves are powerless to control the markets for the products of labour; and, therefore, powerless to maintain wages and rules which the market price of commodities will not afford. And the lesson has not come too soon.'

[1] *Third Report*, pp. xxi and x.

[2] The negative attitude of trades union leaders and the indifferent progress made in labour organization tend to support the contention of Mr. John T. Dunlop that movements in the cost of living play an important role in motivating trades union policy ('The Movement of Real and Money Wage Rates', *Economic Journal*, Sept. 1938). Arguing against Keynes's contention that trades union leaders keep their eyes almost exclusively on money wage rates, he

The nature of economic development in the Great Depression cheapened the cost of most commodities, caused chronic excess capacity, and increased the elasticity of their supply. The supply of labour showed no comparable tendency to increase: the demand for labour, as for other commodities, was maintained. And the price of labour does not follow the movement of the index for commodities in general. In the trade cycle, as abstracted for theoretical analysis, wages and prices tend to move roughly together (the former perhaps lagging). The processes of cyclical inflation and deflation are calculated to increase and to reduce the competitive value of all factors of production more or less together. The divergence between the course of general prices and money wages in the Great Depression is evidence against any interpretation of it as a chronic general deflation induced by monetary or other forces:

	(*1900 = 100*) *Sauerbeck general prices*	*Money wages*
1873 . .	148	86·6
1879 . .	110	81·6
1883 . .	96	83·2
1886 . .	84	82·7

Such wage reduction as could be effected came largely in the mining areas, where the famine conditions of the boom for a short time gave rise to exorbitant monopoly wage rates. A part of the miners was thereafter burdened with sliding-scale agreements, which associated wages with mineral prices. The consequent lowering of wages was the chief irritation in the labour market through these years. Out of resentment against the sliding scale was to arise the most important labour development of the eighties, the Miners' Federation.[1] In the one case where an institutional arrangement worked

adduced evidence showing the sensitivity of trades unions to declines in real wages caused by a rise in the cost of living. He concluded that it was inaccurate to hold that the lag of money wages behind retail prices in times of prosperity was sufficient to produce inverse movement between money and real wages.

[1] 'Review of 1886', *Economist*, p. 31; G. D. H. Cole, *A Short History of the British Working Class Movement*, 1925, vol. ii, pp. 152–3.

against the forces of the market a counter-institution appeared.

The position of entrepreneurs was such that they would certainly have forced wage reductions if it were feasible. With profit margins narrowing they searched for means of cutting money costs. There was none of the breezy atmosphere of 1871–2 when, despite complaints from industry and occasional strikes, wages were raised freely, and prices rose without a loss of new orders.[1] Nor was it the power of labour union organization which made wages sticky. The Royal Commission's dictum was that 'the unfavourable elements (among them narrowing profit margins) in the existing state of trade and industry cannot with any justice be attributed to the action of trades unions and similar organisations'.[2] Trades union membership languished through these years.[3]

Before the 1886 commission Lowthian Bell stated that 'the workmen were getting all the profit, the iron manufacturers none', but he added that he did not wish it to be inferred that he thought the workmen were too highly paid.[4] The competitive market for labour simply did not produce a falling wage. Even in 1884, when the cycle was well past its peak, an attempted agreement among cotton operators to lower wages by 5 per cent. was broken. The employers, one by one, 'found it prudent' to restore the former wage.[5] Output was expanding, the supply of men was limited. Capital was not

[1] *Economist*, 'Review of 1871', pp. 1–5; *Economist*, 1872, p. 771; 'Review of 1872', pp. 8, 10, 11, 15, 55.

[2] *Third Report*, p. xxi.

[3] Cole, op. cit., p. 202. Total Trades Union Congress membership moved as follows (in thousands):

1868—114
1873—735
1879—522
1883—561
1886—638

[4] *Third Report*, p. viii.

[5] 'Review of 1884', *Economist*, p. 29. Like the mine owners, cotton-mill owners had attempted to regulate wage scales 'by the returns yielded to the masters'. A strike resulted which the masters apparently had won. Some of them, however, began to bid labour away from competitors by offers of the former wage. As a result the old wage level was restored, 'the fruit of their hard earned victory' given up: 'Ever since peace has reigned in the domain of wages.'

sufficiently a substitute for labour. Although labour-saving machinery might be introduced, its results for industry as a whole were not on a scale large enough to reduce the demand for labour so sharply as to permit a reduction in money wages. In only two periods could that be done: immediately following the 1873 crisis, when temporary boom rates were lowered (wages fell from 87·2 in 1884 to 84·9 in 1876); in the collapse of 1878–9, when unemployment rose as high as 10·7 per cent. (wages fell from 84·4 in 1877 to 81·6 in 1879). Even the severe unemployment of the middle eighties (1886, 9·55 per cent.) produced only a fall from 83·2 in 1883 to 82·7 in 1886. The laws of marginal productivity and free competition operated, although the labour market was by no means completely competitive.

III

While money wage bargains kept up payments to labour, other developments in the system produced falling retail prices. In industry excess capacity, cheaper sources of raw materials, and new technical methods combined to create a régime of almost steadily falling prices. A conjuncture of parallel circumstances tended to lower the cost of the principal items among the working man's 'necessaries'.

The following are the price movements of chief grain products:[1]

	(1900 = 100)							*Household bread London per 4 lb.*
	Wheat		*Barley*		*Oats*			
	Brit.	*Import.*	*Brit.*	*Import.*	*Brit.*	*Import.*	*Maize*	
1873 .	218·0	191·3	162·2	143·9	144·5	154·7	155·2	8·0*d.*
1886 .	115·2	111·0	106·7	95·7	117·1	125·0	118·5	6·3*d.*

The expansion of Indian and American agricultural territory, the railway development throughout the American continent, and the cheapening of shipping rates were the

[1] W. Page, *Commerce and Industry*, 1919, vol. ii, pp. 216–23, for a variety of wholesale foodstuff prices. For figures given above, pp. 216–17 and 219.

principal agents in this decline.[1] Layton and Crowther quote the case of Minnesota wheat producers:[2]

> the value of farm crops on the farm in inland states actually rose per unit in the twenty years preceding 1895, but owing to the fall in the cost of freight to the seaboard, the producers could place their produce on board ship at a lower price than before, while retaining a larger sum as their own share. This, of course, damaged the position of the seaboard farmers relatively to their inland competitors. But though the fall in prices on the seaboard was considerable, it was even more severe in Europe, owing to the steady but rapid fall in the cost of carrying grain across the Atlantic.

Here are the long-term cost-reducing effects of investment (in railroads and shipping) which, in the short period, caused sharply rising capital-goods prices.

The prices of tea and sugar followed a similar pattern as new production areas were opened:[3]

	(*1900 = 100*)	
	Tea	*Sugar*
1873 . .	131·9	264·0
1886 . .	97·6	130·3

The investment of British capital in Indian tea plantations accounts for the cheapening of that staple. Between 1879 and 1888 Indian exports of tea increased from 35 million lb. to 113 million lb. A contemporary observer commented that

> herein we have another striking example of the inability of unskilled labour and labour following old processes, even at extremely low wages, to contend against intelligence and machinery; inasmuch as the English planter in India, by skilful cultivation and careful

[1] The opening of the Suez Canal (1869), of course, had lasting and important effect on all imports from China and India. The shipping booms of the early seventies and eighties, not only provided, or even over-provided, the trade with more economical vessels, but world competition was made increasingly severe and freight rates lowered by the practice of subsidies to the merchant marine indulged by continental countries. See *Third Report*, 10, 108–33 and 10, 571–5 (W. R. Price and J. Burke).

[2] Op. cit., p. 90, from *The Purchasing Power of Gold*, report by J. M. Powers, to the Bureau of Labour, Minnesota, 1897.

[3] Page, op. cit., p. 221.

manufacture with machinery, is now able to place in Europe a tea of good quality and greater strength at a price which the Chinaman, with his old methods, producing an inferior article, cannot afford.[1]

The subsidized development of beet sugar on the Continent caused the remarkable fall in its price. Britain's free market collected the premiums of a fierce international competition.[2] Tobacco, rice, butter (imported), spirits, among other basic consumers' commodities, showed the same falling tendency: retail prices as a whole were 137·1 in 1873, 103·4 in 1886.[3]

Faced with the competition of virgin soils, British grain agriculture met falling world prices at the expense of its rents and profits. The British cattle- and sheep-farmer confronted no such immediate rivalry; and British beef and mutton prices were maintained. Australian frozen meat did not begin to cut meat prices until well into the eighties:

	(*1900 = 100*)[4]		(*1865–9 = 100*)
	Beef	*British mutton*	*Economist index*[5] *butchers' meat*
1873 . .	126·7	111·8	120
1879 . .	113·8	109·7	105
1883 . .	125·9	120·8	121
1886 . .	100·0	100·0	90
1890 . .	100·0	104·2	—
1896 . .	91·4	90·3	—

Prices fell because capital development had reduced costs. The price reductions do not seem to be the consequence of a gold shortage. When investment did not reduce the cost of producing a commodity (i.e. labour), its price did not conform to the general movement.

[1] Layton and Crowther, op. cit., pp. 90–1.

[2] Ibid., pp. 88–9. Also *Third Report*, testimony of Messrs. Martineau, Duncan, Easton, and Neill, 13, 154–13, 327. These men represented the British sugar-producing interests, and dwell, therefore, on the hardships of foreign competition. The nature of the process at work, however, is clearly reflected in their bitter responses.

[3] Page, op. cit., pp. 216–17 and 219.

[4] Ibid., p. 220. Coffee, similarly, did not fall in price. A lack of new methods and series of bad harvests kept its price from showing a secular decline (Layton and Crowther, op. cit., p. 91).

[5] *Third Report*, Appendix, Table 26, p. 343.

IV

An element in the increase of real wages was the favourable trend of the terms of Britain's foreign trade. From 1873 to the turn of the century (roughly the Great Depression) they secularly declined. The Taussig–Silverman statistics give the movement of net and gross barter terms of trade as follows:[1]

	Import price index / *Export price index*		*Estimated physical quant. exports* / *Estimated physical quant. imports*
	Taussig	*Silverman*	*Taussig*
1880 . .	124	109	129
1900 . .	100	88	100

Since British goods' exports in the pre-war period responded immediately to her capital exports,[2] this development is consistent with the tendency for home investment to increase relative to foreign investment. Mr. Colin Clark associates the improvement in the terms of trade with the increased productivity of British industry.[3] He notes a parallel trend in post-war years, a reverse tendency in the pre-war decade. In all cases productivity and the terms of trade move together. He does not, however, attempt to link the direction of investment with productivity, in as much as he holds that there is no causal connexion between the amount of capital invested

[1] F. Taussig, *International Trade*, Appendix I, pp. 412–13. A. G. Silverman, 'Index Numbers of British Export and Import Prices', *The Review of Economic Statistics*, 1930, p. 147. Also G. Haberler, *The Theory of International Trade*, pp. 161–6.

[2] Taussig, op. cit., chap. xxi, especially pp. 247 and 259–60. See also Silverman, loc. cit., 1931. 'Some International Trade Factors for Great Britain', pp. 123–4.

[3] *National Income and Outlay*, pp. 270–1. Clark states that the improvement in Britain's terms of trade from (*circum*) 1877 on was accompanied by 'a heavy downward trend in prices, increased unemployment, and a general atmosphere of trade depression'. He uses this case to support his doctrine of Economic Indigestion which holds that a large part of the gains from increased productivity or an improvement in the terms of trade is dissipated in unemployment. Although the existence of abnormal unemployment in the Great Depression is by no means established, the phenomenon to which he refers may be viewed causally as arising from the changed direction of investment, producing a shift in the terms of trade, falling prices, falling profit margins, 'a general atmosphere of trade depression'—and, perhaps, an increase in productivity as well.

and productivity.[1] In the three cases mentioned, however, the two dominated by rising productivity were notably slack in capital export, the pre-war decade dominated by it. Taussig has found a good inverse correlation between wages and the barter terms of trade in the forty-three years before the war.[2]

An improvement in the terms of trade would be expected to result from a sharp decrease in foreign lending. If one considers the adjustment as effected primarily through shifts in purchasing power, it follows that a decrease in capital export should produce, other things remaining equal, an increase in import quantities, relative to export quantities, and probably a relative fall in import prices. Over the period 1873–1900 this, in fact, occurred; and when capital export revived in 1904–5, a reverse movement was inaugurated. The process through which Britain's exports of railway iron, for instance, fell off as a result of reduced foreign lending is evident.[3] The manner in which consumers' purchasing power at home was maintained, and thus the quantity of imports, is also clear. The tendency for exports to lag in their increase behind imports—the improvement in the barter terms of trade—is consistent with the general view taken of the period.

The net barter terms of trade, however, escape such symmetrical explanation. It is virtually impossible to calculate the extent to which the secular shift in relative prices may be associated proximately with the direction of British investment. One can merely point to the existence of the expected correlation. It is quite possible that the following trend, important to British real wages, had no connexion with the changed direction of investment, except in so far as activity at home and high wages kept the price of British manufactured exports from further decline:[4]

Amount of manufactured exports given for a fixed quantity of food imports

1881 . .	132
decade ending 1890 . .	119
decade ending 1900 . .	107

[1] Ibid., p. 273.
[2] 'Great Britain's Terms of Foreign Trade,' *Economic Journal*, 1925, p. 10.
[3] See above, pp. 71–2.
[4] J. M. Keynes, *Economic Journal*, 1923, p. 478, in a rejoinder to Beveridge.

For the Great Depression as a whole the secular trend in the terms of trade is clearly established. For the years before 1886, however, the data are less decisive. The growth of an import trade balance and an improvement in the gross barter terms of trade appear between 1873 and 1886; but the relative fall in import prices does not develop until later in the period. In value terms, Hobson's approximations for the balance of payments are as follows:[1]

	(*in £ millions*)			
	Total of ships, shipping, insurance, banking, and government remittances	*Import excess*	*Balance of cap. and int. items*	*Capital export*
1873 . .	87·3	65·0	−22·3	72·3
1879 . .	74·6	109·8	35·2	12·1
1883 . .	83·4	122·3	38·9	16·9
1886 . .	69·1	80·3	11·2	61·8

An adjustment of the trade balance to foreign lending is evident.

The gross and net barter terms of trade are as follows:[2]

	Value net imports	*Value net exports*	*Import price index*	*Export price index*	*Quantity imports*	*Quantity exports*	*Gross barter terms*	*Net barter terms*
1868 .	247	189	152·8	114·6	161·7	156·2	96·6	133·3
1873 .	315	255	151·4	126·2	208·1	202·1	97·1	120·0
1879 .	306	192	124·5	88·6	245·8	216·7	88·2	140·5
1883 .	362	240	125·9	88·6	287·5	270·9	94·2	142·1
1886 .	294	213	96·3	77·2	305·3	275·9	90·4	124·7
	A	B	C	D	E	F	$\frac{F}{E}$	$\frac{C}{D}$

The gross barter terms of trade move generally in the expected direction. The net barter terms, however, are dominated by the extraordinary inflation of export prices in

Also Pigou, op. cit., p. 389 for annual figures, 1881–1914. See Silverman, *Review of Economic Statistics*, 1931, pp. 117–18 for a discussion of the Keynes–Beveridge controversy over the meaning of these figures.

[1] C. K. Hobson, *The Export of Capital*, 1920, pp. 197 and 223.

[2] The price estimates have been arrived at by linking the Giffen indices (*Third Report, Commission on Depression*, appendix B, p. 329) with the Silverman figures. Exports do not include bullion or re-exports.

1873 and their subsequent deflation. While export prices rose from 114·6 to 126·2 in 1868–73, import prices actually fell from 152·8 to 151·4. The period of adjustment before relative prices moved in favour of Britain is shown also in the following figures compiled by Beveridge:[1]

Food import price as percentage of manufactured export price

1868	107	1875	98	1881	123
1869	101	1876	105	1882	120
1870	98	1877	125	1883	119
1871	106	1878	116	1884	114
1872	92	1879	117	1885	111
1873	88	1880	115	1886	112
1874	94				

Not until the eighties did relative *prices* begin to exhibit the long-term trend, although the relative *quantities* of goods imported and exported responded immediately to the new investment conditions. It is significant that the increase in real wages did not await the favourable tendency in the net barter terms of trade. In the Great Depression money wages did not follow the movement of export or other prices. They remained steady enough to give labour a net advantage over the previous period from any retail price decreases that took place.

V

Two propositions have been thus far asserted: (*a*) that in the Great Depression the marginal return to capital fell, that to labour rose; (*b*) that the proportion of capital employed in production increased relative to the amount of labour. The distribution of shares in the national income remains still to be investigated. Any statements involving such quantitative judgement might well be prefaced with Mr. Bowley's conclusion on the available statistics:[2] 'I do not think that the statistics are sufficient for any fine measurements of income, earnings, of wages prior to 1880; there is indeed sufficient uncertainty after that date.'

Although the material is fragmentary, it clearly suggests that the national income changed in its distribution during the Great Depression. Examining the period 1880–1913

[1] 'Mr. Keynes' Evidence for Overproduction', *Economica*, Feb. 1924, p. 7.

[2] *Wages and Income in the U.K. since 1860*, p. 99.

Bowley found that the proportion of income going to property and labour was as follows: (per cent.)[1]

	Property	*Labour*
1880 . . .	37½	62½
1900 . . .	36 or 35	64 or 65
1913 . . .	37½	62½

He summarizes:[2]

> The broad results of this investigation are to show that the national dividend increased more rapidly than the population in the generation before the war, so that average incomes were quite one-third greater in 1913 than in 1880; the increase was gained principally before 1900, since when it barely kept pace with the diminished value of money. The increase was shared with remarkable equality among the various economic classes. Property obtained a diminishing share of the home product, but an unchanged share of the whole income when income from abroad is included.

It would appear that changes in the relative proportions were largely determined by the extent to which Britain's income from abroad altered. Increased investment within the country produced lower yields on capital sufficient to give a larger share to labour, despite the total increase in capital; a relative increase in capital exports (as in 1904–13) countered the distributional trend at home.[3]

On the years 1873–86 the Commission on Depression concluded as follows:[4]

> We have shown that while the general production of wealth in the country has continuously increased, its distribution has been undergoing great changes; that the result of these changes has been to give a larger share than formerly to the consumer and the labourer, and so to promote a more equal distribution. . . . While the share of the aggregate wealth produced in the country which now falls to labour is larger than it was twenty years ago, a corresponding diminution has taken place in the share which falls to capital: in other words that while wages have risen profits

[1] *Wages and Income in the U.K. since 1860*, p. 92. [2] Ibid., p. 26.

[3] The distribution of home-produced income gave property 34 per cent. in 1880, only 31 per cent. in 1913.

[4] *Third Report*, pp. xxiii, xxi, xv, and xvi. In the Report there may have been some tendency directly to associate changes in unit profit and unit real wages with changes in distribution, without considering carefully the more precarious problem of relative shares in the total dividend.

have fallen . . . it would appear that the number of persons with incomes of less than £2,000 a year has increased at a more rapid rate than the population (which increased about 10 per cent.) while the number of persons with incomes above £2,000 has increased at a less rapid rate, and the number with incomes above £5,000 has actually diminished: and, further, that the lower the income the more rapid the rate of increase. . . . The view, therefore, which we are disposed to adopt is that the aggregate wealth of the country is being distributed differently and that a large part of the prevailing complaints and the general sense of depression may be accounted for by changes which have taken place in recent years in the apportionment and distribution of profits.

Chief evidence for these statements, aside from the plaintive testimony of those deriving income from profit margins, was the following table:[1]

Schedule D—Trades and Professions

£ £	*1874–5 no.*	*1884–5 no.*	*Increase no.*	*Per cent. increase*
200–1,000 . . .	162,435	215,790	53,355	32·85
1,000–2,000 . . .	11,944	13,403	1,459	12·21
2,000–3,000 . . .	3,797	4,038	241	6·34
3,000–4,000 . . .	1,857	1,914	57	3·07
4,000–5,000 . . .	1,003	1,074	71	7·07
5,000–10,000 . . .	2,035	1,928	−107	−5·25
10,000 and up . . .	1,283	1,220	−63	−4·91
TOTAL . . .	184,354	239,367	55,013	29·84

The same distributional trend holds for the period 1880–1900 as more recently calculated by Bowley.[2] His figures support the earlier generalization:

	The distribution of the national income			
	National income (in £ millions) (say)	*Percentages of total*		
		Over £160	*Intermediate*	*Wages*
1880	1,090	49	11	40
1881–5 . . .	1,160	48	12	40
1886–90 . . .	1,270	46	14	40
1891–5 . . .	1,400	44	14½	41½
1896–1900 . . .	1,620	45	14	41

[1] Ibid., p. xvi.

[2] Loc. cit., p. 92.

If the distribution between property and labour was 37½ per cent. to 62½ per cent., respectively, in 1880, one is permitted to include all of wages and intermediate income, and (in 1880) 11½ per cent. (of total income) from 'Over £160'. The income-tax returns for Schedule D showed that among taxable incomes, a redistribution took place in favour of the lower brackets. It may be assumed then, that the net decrease in the proportion going to incomes 'Over £160' was due to the relative decline in incomes to 'property', not to that part of the category going to higher grades of 'labour'. Although these calculations are crude, there seems to be some justification for holding that the processes at work during the Great Depression tended to distribute wealth slightly in favour of labour.

The general theory relevant to this development is thus stated by Mr. Hicks:[1]

> If the amount used of factor B (labour) is kept constant, while that of A (capital) increases, the marginal product of A must fall (this is the ordinary law of diminishing returns). It follows directly from this that, if A is paid according to its marginal product, the total share in the product imputed to factor B must rise when the employment of A rises. Further, under constant returns to scale, an increase in factor A must raise the marginal product of factor B. . . . An increase in the supply of a factor will increase that factor's share in the social dividend if the elasticity of substitution between it and other resources employed is greater than unity.

These two dicta are made under the assumption of two factor production, perfect competition, constant return to scale, and without considering the consequences of 'keeping capital intact'. Although set in rigid limits it conforms roughly to the process apparent in the Great Depression.

In *The Theory of Wages* Hicks presents two illustrative cases.[2] In the first the relative amount of capital increases, but invention is stagnant. Total output increases, the relative share of labour rises, that of capital falls. In the second, the

[1] J. R. Hicks, 'A Revised Theory of Distribution', *Review of Economic Studies*, Oct. 1936, p. 3.
[2] pp. 127–30.

relative increase in the use of capital is accompanied by enough labour-saving invention to keep the elasticity of substitution above unity. Here total output increases and the total share of labour, i.e. real wages; but the relative share of labour falls, that of capital rises. Although new methods abounded, the facts of the period fit the first rather than the second case. Labour-saving invention in the period may be regarded in either of two ways: as induced invention, cushioning to an extent the fall in profits; or as 'the more extensive use of capitalistic methods' made feasible by a lower rate of interest. The distinction, one feels, is not sharp. In any case, the net movement of $\frac{A/Pa}{B/Pb}$ (as reflected in the distribution of relative shares) seems to indicate an elasticity of substitution somewhat less than unity.[1]

The picture which emerges, then, is one of a society in which internal investment, devoted to the refinement and increase of the community's capital stock, rose relatively to total new investment, increasing labour's absolute and relative shares in the national income. It is a picture in many ways symmetrical to that of Britain in the period 1920–39. The expected marginal efficiency of capital, however, was sufficiently high for this process to be pursued through private investment channels, without the appearance of extraordinarily high or persistent unemployment. The Great Depression, in that way, contrasts sharply with contemporary industrial societies, within which it is doubtful if full employment will ever again be attained, over long periods, exclusively through investment motivated by expectations of private profit.

[1] Hicks, loc. cit., pp. 131–2: 'If we accept these figures [Bowley's, given above] then it is clear that the elasticity of substitution must at this time have been rather less than unity. Not necessarily very much less; quite a small difference would be sufficient to give the observed result.'