

Fanfare to Action – Income Distribution  
as a Cause of Inflation

By Ronald Burgess

ESA Paper No. 3

January 1973

© Economic Study Association, 2024

All rights reserved.

## ECONOMIC STUDY ASSOCIATION LIMITED

The Economic Study Association was incorporated as a Company limited by guarantee on the 22nd February 1966, and is registered with the Charity Commission under the Charities Act, 1960.

The main object of the Association is to pursue economic research upon independent lines of enquiry, and its members come from all walks of life and have political allegiances which cover all three main parliamentary parties.

### Council of Management

H. R. NEIL

R. G. J. BURGESS

J. P. D. MacGEORGE

60 York Road,  
Acomb,  
York, YO2 5LW

Price 75p.

# **Fanfare to Action – Income distribution as a cause of inflation**

## **Contents**

Foreword	ii
I Wage and Salary Costs	1
II Long Term Cycles	5
III An Explanation of the Rising Trend	12
IV Gross National Claims	17
V The Enumerators	27
VI The Shifting of Employment Impact Taxes	32
VII The Effective Incidence of Taxation on Property Income and Profits	36
VIII The Economic Upper Limit and Taxable Capacity	43
IX Policy Implications	48
References	60

## Foreword

At frequent intervals during the past twenty-five years successive British Governments have deemed it their duty to attempt to halt the persistent decline in the internal purchasing power of sterling. Their adversary has become known as 'inflation', a hydra of the wage price spiral.

In January 1973 the British Parliament is debating yet again government proposals for a further assault upon the old adversary.

The plan of action remains unchanged: it is to hold down wages and prices below the level dictated by market conditions. The plan has failed before and there is no reason for assuming that this new variation has any better chance of lasting success. But is this battle really necessary? Are rising wages the cause of rising prices? Are rising prices the cause of rising wages?

In this study of product shares, evidence leads to the conclusion that for the most part rising prices in Britain have resulted from the profligacy and mismanagement of central government. I suggest here that the battle is not necessary, but the situation does demand immediate action from the government of the day. It is interesting to note that my study confirms the analysis made in the publication *Excessive Taxes lead to Inflation* which was recently published by the Economic Research Council in March 1972.

I would like to acknowledge my indebtedness to Professor Jack Wiseman for his help and assistance and in particular for granting the use of modern facilities at the Institute of Social and Economic Research at the University of York. I wish also to record my thanks to the Trustees of the Wincott Foundation, and to others whose contributions to the Economic Study Association's funds made this work possible.

Ronald Burgess  
Economic Study Association  
Acomb, York  
January 1973

---

# I

## **Wage and Salary Costs**

It has become accepted as a near self-evident truth that ever rising wages and salaries are the main cause of inflation in the United Kingdom. This phenomena is seen as the root cause of rising costs, rising prices, falling profits and the general inability of British industry to compete in world markets. From the White Paper on Employment Policy issued in May 1944 (Cmd. 6527) through to the present day, successive British governments have seen the need to restrain the rising trend of labour incomes.

The relating of wages to productivity has been tried in a variety of ways from outright wage freezes to attempts at comprehensive prices and incomes policies. Almost inevitably such policies have only succeeded in fanning the flames of industrial unrest and thus are considered by many to have created the apparent need for the Industrial Relations Act whose operation has tended to bring even the law itself into disrepute.

In Table 1 is presented the kind of evidence frequently repeated by those responsible for economic policy but rarely questioned by anyone. Every year for the past 23 years during which comparable figures are available the annual percentage increase in money wages and salaries has exceeded the annual percentage increase of consumer prices and of output; of this there can be no doubt. However, if for any reason the internal purchasing power of money persistently declines then it is almost inevitable that money wages and salaries, in common with other factor incomes, will be rising faster than prices or output. Table 1 does little more than illustrate what is to be expected in the conditions that have prevailed during recent decades within the United Kingdom. Such percentages do not offer direct evidence in support of the hypothesis that rising money wages and salaries are a first cause of rising prices.

Most cost inflation theories lay particular stress on increases in money labour costs per unit of output resulting from what may be described broadly as ‘Trade Union pressures’ (1). Unfortunately, when such theories are tested empirically, it is common to compare wages and salaries, or some kindred series, at current prices with output measured at constant prices: a comparison of unlike terms.

**Table 1: Annual percentage increase  
of earnings, prices and output**

Year	Earnings (1)	Prices (2)	Output (3)
1949	6.5	2.3	3.5
1950	5.1	2.7	3.7
1951	11.1	9.4	2.2
1952	6.8	5.9	-0.7
1953	5.7	2.0	4.0
1954	7.0	2.0	4.2
1955	9.7	3.4	3.4
1956	8.9	4.6	1.0
1957	5.8	3.3	1.8
1958	3.2	2.7	-0.1
1959	4.9	1.0	4.5
1960	7.9	1.1	5.4
1961	8.2	2.9	1.8
1962	5.3	3.8	1.4
1963	4.8	1.9	3.3
1964	8.4	3.3	5.9
1965	7.6	4.5	2.7
1966	6.6	3.8	1.7
1967	3.8	2.5	1.6
1968	6.5	4.5	4.0
1969	7.0	5.3	2.1
1970	11.5	5.4	1.9
1971	10.9	7.7	1.7

1. Wages and salaries, CSO Ref. 13a.

2. Price index of consumer goods and services.

3. Gross Domestic Product at factor cost, CSO Ref. 66.

A valid test of the hypothesis requires at least that like terms be compared with like. As shown on Chart A, if the purchasing power of money is declining then wages and salaries measured in current monetary values may well be rising sharply per unit of output, yet concurrently with a falling real burden. Thus, the conclusion to be drawn from Chart A is that whilst wages and salaries may be good conductors of inflationary forces it is only in recent years that there is even a *prima facie* case suggesting that they may be conveying an active force making for inflation.

Although successive British governments have all accepted the wage cost explanation as a basis for their policy decisions and, as shown by a recent survey conducted on behalf of the Institute of Economic Affairs (2, p.48), such acceptance is in line with public opinion, the much publicised evidence is highly inconclusive.

If indeed wage cost inflation is the right diagnosis then it is to be expected that not merely are wages and salaries rising faster than prices or output but that they are rising that much faster as to increase their share of the product.

In 1939 Keynes described the stability of the share of labour in the national dividend as one of the “best established facts in the whole range of economic statistics” (3, p.48); but more recently, Professor Jan Pen dismissed such a notion as a myth (4, p. 164).

Amongst British economists also there has been a reversal of opinion and it is now widely accepted that the labour share of the product in the United Kingdom is not stable and has a rising trend.

This opinion, which is in harmony with the wage cost theory of inflation, relies to a large extent on work completed during the fifties and sixties by Phelps Brown, Hart and Feinstein.

A re-appraisal of their work on the basis of later information taking into account the effects of rising taxation suggests, however, that their conclusions require substantial qualification if not to be misleading in present day conditions.

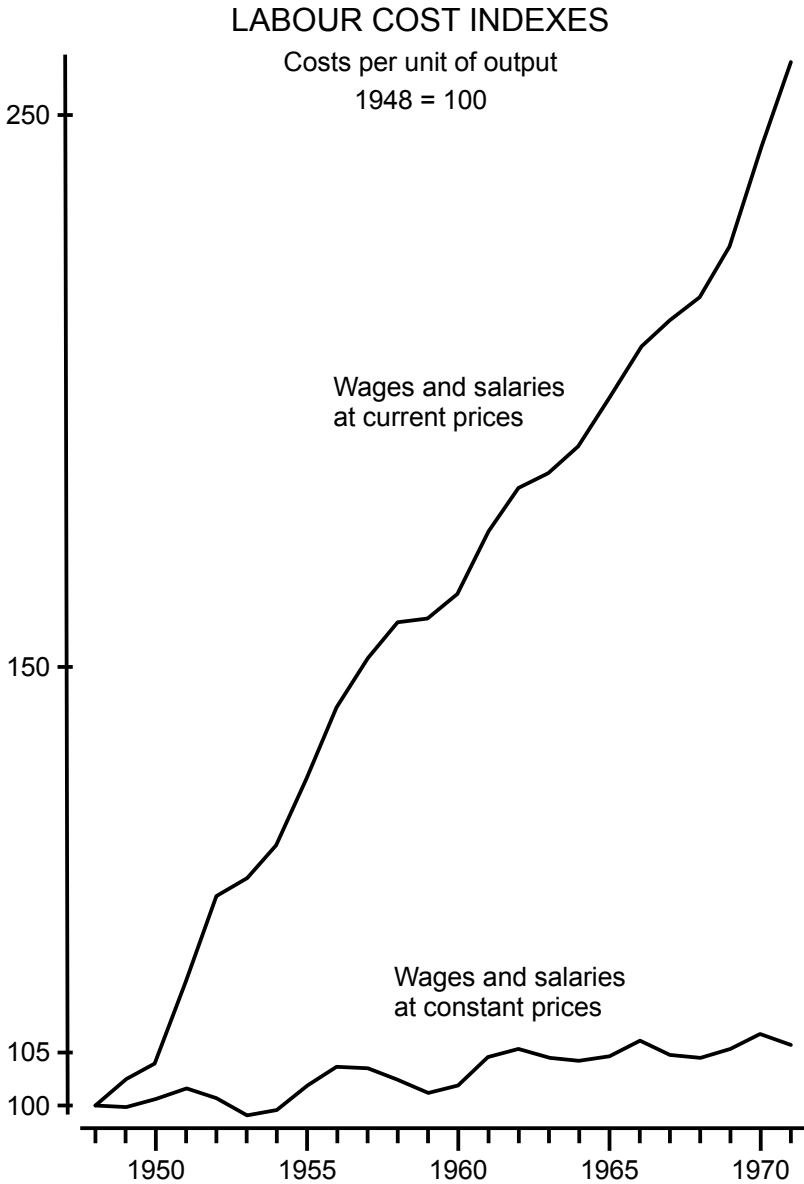


Chart A



---

## II

### Long Term Cycles

In an article published in 1952 analysing the share of wages in the national income of the United Kingdom, E. H. Phelps Brown and P. E. Hart concluded that whilst the changes in the share of wages were not as great as might be expected, shifts did occur, and the share followed trends of change for many years together (5).

Although today their decision to distinguish between wages and salaries must be queried, their conclusions still have a particular relevance for the seventies. Further, as will be argued, acceptance of these conclusions is not, in the light of an additional 21 years of continuous data, incompatible with the hypothesis of a stationary secular trend for the employees' share in the national product.

Whilst recognising the steadily declining social and economic importance of the distinction between wage earners and others, Phelps Brown and Hart decided that, during the time period which they had under review, the consequences of "the line firms usually draw between 'operatives' and 'staff' in manufacturing continued to give a special economic importance to wages and wage earners" (5, pp.254-255). Since 1950, however, the social and economic importance of this division has declined almost to vanishing point.

The 1968 edition of the CSO's *Sources and Methods* warned that "only a limited importance can be attached to the separation of wages from salaries in the national accounts. The distinction is necessarily arbitrary and no clear dividing line can be drawn." The reason put forward for making the division in some tables was that "the process of wage settlements are more highly organised than those for the determination of salaries" (6, p.121).

Today with, inter alia, the growth of 'white collar' unions, even this reasoning carries little weight and the 1971 edition of the CSO *Blue Book* of national statistics gave totals for all employees only.

# WAGES AND SALARIES and TAKE HOME PAY

As percentage of Home Produced National Income

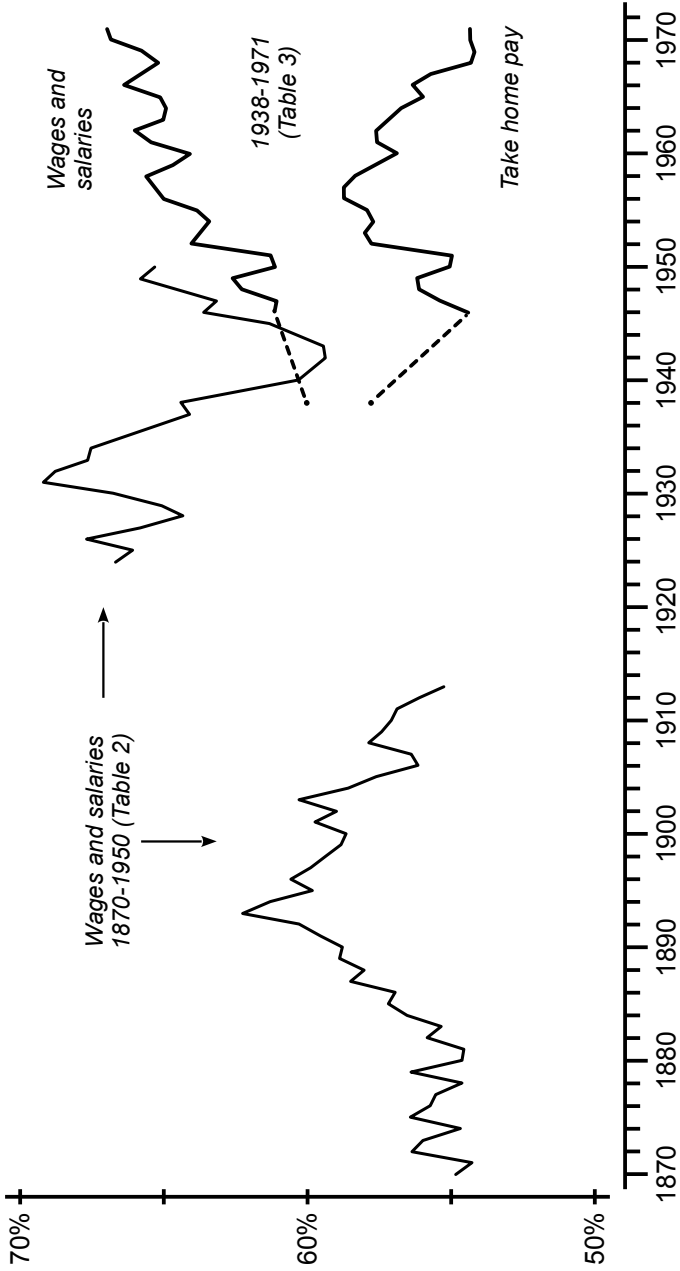


Chart B

The relationship between employee and employer is however of continuing major economic importance in all developed countries, and indeed it is fundamental to the present system, for it is this relationship which gives rise to both wages and salaries. In present circumstances there seems to be no longer a case for maintaining a distinction between wages and salaries.

In Table 2 the estimates published by Phelps Brown and Hart in 1952 are recalculated to show combined wages and salaries as a percentage of the 'net home produced national income'. In Table 3, the percentages are based on estimates extracted from the latest *Blue Book* information. For each year the estimate of the net home produced national income used as the denominator is the same for both columns and is calculated in the manner suggested by Phelps Brown and Hart (5, p. 275). The numerator for wages and salaries is as defined by CSO in Reference 13a, and for take home pay it is wages and salaries less direct taxation. The percentages given in Tables 2 and 3 are illustrated on Chart B.

As may be seen readily from Chart B, wages and salaries show a rising trend from 1946 onwards of about one percentage point every five years, and such a persistent trend has no counterpart during the earlier years. However, take home pay during the post World War II period shows a remarkable resemblance to the course of wages and salaries in the years prior to World War I, which suggests that it is these two series that should be equated.

Prior to 1914, income tax hardly affected wage earners and its incidence on salaries was not significant; rates were low, and the tax was intended to fall upon the rich and middle classes. Social security taxation was not enacted, so far as wages and salaries were concerned, until 1911. With certainty it can be asserted that up to the year 1913 the difference between wages and salaries and take home pay was less than the margin of error contained in the annual estimates upon which the percentages given in Table 2 are based. During the period from 1870 to 1913, therefore, wages and salaries may be taken as the same aggregate as take home pay.

From this it must be concluded that it is misleading to compare wages and salaries after 1946, as defined by the CSO's Reference 13a, with wages and salaries for the period before 1914. The right comparison is between levels of take home pay throughout.

The evidence presented in Tables 2 and 3, which is illustrated on Chart B, strongly suggests that take home pay when expressed as a percentage of net home produced national income is, however, subject to long term cyclical fluctuations, with troughs in the years 1881, 1913, 1942 and 1969.

In the years prior to World War I, the take home pay percentage shows a general tendency to rise from 54.5 per cent in 1881, to a peak of 62.3 per cent in 1893, followed by a general tendency to fall until in 1913 it was 55.1 per cent, and only 0.6 of a percentage point above 1881. On the assumption that 1881 and 1913 are the trough years, then the secular trend of this cycle calculated by the least squares method has a value of  $y = 58.2 - 0.013x$ . Allowing for margins of error in the original estimates, a declining trend of less than a percentage point every 80 years is of little significance and cannot be held to refute the hypothesis of a stationary, or even a slowly rising, secular trend.

Unfortunately the post World War II period for which accurate and detailed estimates are available does not cover a full phase of the hypothesised cycle but, as may be concluded from Chart B, the possibility of a cycle with a peak in 1956/57 and a trough in 1969 is very strong.

Further, the secular trend of the take home pay percentages for the years 1946 to 1969 inclusive has a value of  $y = 52.08 - 0.011x$  which is in line with the possibility that for the full phase it might well have been stationary. Certainly any trend must be expected to be very slight.

For the middle cycle with troughs in 1913 and 1942, data which does not start until 1924 can give but little information as to the likely trend. However, it may be noted that the apparent peak year of 1931 is not inconsistent with the cycle hypothesis.

The relatively high percentages that are obtained from Phelps Brown and Hart's estimates for the inter-war years from 1924 to 1939 seem more likely to be the result of bias rather than of having some economic significance. It must also be assumed that the latest *Blue Book* estimates have a greater accuracy than the data that was available some twenty years ago, and a comparison of the alternative estimates for the year 1938 suggest that the bias could have amounted to an error of 3.3 percentage points.

Direct taxation was also of significance in relation to wages and salaries during the inter-war years and in 1938, on the basis of the *Blue Book* estimates, there is a difference of 2.3 percentage points depending on whether wages and salaries or take home pay is used as the enumerator. Thus, the possibility that the high percentages obtained for the interwar years have some economic significance, perhaps the result of an activity factor, cannot be dismissed but errors in both the enumerator and the denominator, as well as the result of taking wages and salaries rather than take home pay as the enumerator, must be largely, if not wholly, responsible.

This reconsideration of the estimates first published by Phelps Brown and Hart in 1952 suggests, in the light of later information, the hypothesis that the share of take home pay in the net home produced national income is in fact subject to cyclical fluctuations having troughs in 1881, 1913, 1942 and 1969 with a stationary, or barely significant, secular trend.

That the share of take home pay follows trends of change for many years together is a direct result of cyclical movement and is of particular importance for the 1970s. If the cyclical hypothesis is accepted with a trough seen in 1969 then it follows that the present decade will be a period of upswing. The effect of this upswing on wages and salaries apparently grossly inflated by direct taxation is bound to have severe repercussions throughout the economy.

Using the national income estimates published with the 1952 article for the dependent variable, Hart in a later work claims to have completely refuted the hypothesis that the share of labour in

the national product is stable. However, Hart's conclusion relied heavily on results based on the pre-World War I estimates, and he admits that for the two later periods studied from 1920 to 1938 and from 1948 to 1962, his equations produced nonsense results (7).

Clearly, with the margin of error present in the earlier national income estimates, conclusions that cannot be supported, at least to some extent, by later post-World War II estimates cannot be held to refute or to confirm anything. As has been shown, the wages and salaries share calculated from the pre-1913 estimates used by Hart has an insignificant trend and as a consequence Hart's equations most likely 'explain' variations as between rent and home profits.

**Table 2**

**Combined wages and salaries as a percentage of  
net home produced national income, 1870-1950**

Year	%	Year	%	Year	%	Year	%
1870	54.8	1888	58.0	1906	56.1	1933	67.6
1871	54.2	1889	58.9	1907	56.4	1934	67.5
1872	56.4	1890	58.8	1908	57.9	1935	66.5
1873	55.9	1891	59.6	1909	57.3	1936	65.3
1874	54.6	1892	60.5	1910	57.0	1937	64.1
1875	56.5	1893	62.3	1911	56.7	1938	64.4
1876	55.7	1894	61.1	1912	55.7	1939	62.3
1877	55.5	1895	59.7	1913	55.1	1940	60.3
1878	54.7	1896	60.6	...	...	1941	59.8
1879	56.5	1897	59.8	1924	66.6	1942	59.3
1880	54.6	1898	59.3	1925	66.1	1943	59.4
1881	54.5	1899	58.7	1926	67.7	1944	60.5
1882	55.9	1900	58.6	1927	65.7	1945	61.3
1883	55.4	1901	59.8	1928	64.3	1946	63.6
1884	56.6	1902	59.0	1929	65.2	1947	63.2
1885	57.2	1903	60.4	1930	66.6	1948	64.5
1886	56.9	1904	58.5	1931	69.1	1949	65.8
1887	58.5	1905	57.6	1932	68.7	1950	65.3

**Table 3****Wages and salaries and take home pay as a percentage of net home produced national income, 1938-1971**

Year	Wages and salaries %	Take home pay %	Year	Wages and salaries %	Take home pay %
1938	60.1	57.8	1958	65.7	58.3
...	...	...	1959	64.7	57.5
1946	61.2	54.4	1960	64.0	56.7
1947	61.1	55.3	1961	65.4	57.5
1948	62.1	56.1	1962	66.0	57.5
1949	62.6	56.2	1963	65.0	57.0
1950	61.1	55.0	1964	64.9	56.7
1951	61.3	54.9	1965	65.1	55.9
1952	64.1	57.8	1966	66.4	56.3
1953	63.8	58.1	1967	65.7	55.6
1954	63.4	57.7	1968	65.1	54.2
1955	63.8	57.9	1969	65.7	54.1
1956	65.0	58.7	1970	66.8	54.3
1957	65.3	58.7	1971	66.9	54.3

### III

## **An Explanation of the Rising Trend**

At the International Economic Association's specialist conference held at Palermo in 1964, a paper presented by Dr. C. H. Feinstein concluded that, so far as the United Kingdom was concerned, the available evidence "firmly established" a rising product share for labour from 1910-1914 onwards. This result was attributed to two abrupt shifts, during or immediately after each of the two world wars, and to a slow upward drift following World War II (8).

Labour income was again taken as income from employment as defined by the Central Statistical Office's Reference 13, plus an estimate for that part of income from self-employment attributable to labour as distinct from that part accruing as a result of capital employed. The Gross National Product at factor cost (G. N. P.) was used as the denominator.

First, it must be noted that Feinstein presented his conclusions in terms that implied the use of product shares, but the evidence related exclusively to G.N.P. percentages. As will be argued in the next section, the use of Gross National Product at factor cost as the denominator will give misleading results for an economy in which the public authorities rely to any extent upon taxes on expenditure.

In the United Kingdom the yield from taxes on expenditure is a very important part of the total tax revenue and during the period reviewed their yield more than doubled its percentage of G.N.P. It follows from this that the trends calculated by Dr. Feinstein must diverge significantly from the trends of product shares.

Secondly, Feinstein's definition of labour income includes such quantities as the employers' social security taxes and may be more accurately termed 'labour cost' rather than 'labour income'. In his *General Theory* Keynes stated that factor cost and factor income were the same thing viewed from different standpoints (9, p.23),



although even in 1936 this could only be taken as approximately correct for the real world. Thirty years later, acceptance of Keynes' statement for the purposes of an empirical study is almost bound to lead to misleading conclusions.

Today there is a substantial difference in labour's share of the product depending upon whether it is taken at factor cost from an employer's standpoint or as a factor income from the standpoint of an employee. As may be seen from Chart B, wages and salaries which do not include the employers' social security tax are very different from the employees' take home pay, and in present day conditions Feinstein's labour income is not even an approximate indication of the income received by employees (8, p.115).

Between 1860-69 and 1910-14 Feinstein found no evidence for concluding that any significant change had occurred in the labour income percentage. It needs to be emphasised, however, that this was a period when any direct taxation included in his definition of labour income was certainly far less than the margin of statistical error contained in the annual estimates, whilst G.N.P. percentages for taxes on expenditure showed no significant trend.

Although direct taxes were increased during this period, the net receipts averaged no more than the equivalent of two per cent of G.N.P. in the decade prior to World War I. Throughout the period, the yield of taxes on expenditure rarely exceeded the limits of six to seven per cent of the G.N.P. at factor cost.

The marked increase in labour's share that Feinstein noted as occurring sometime between the years immediately preceding the first world war and the early 1920s may be attributed to three main causes. Firstly, in 1913 taxes on expenditure were the equivalent of 6.8 per cent of the G.N.P. based on income data, or 7.2 per cent of the G.N.P. based on expenditure data, but by the year 1921 these had risen to 11.6 per cent and 12.6 per cent respectively. In such circumstances if labour income is to maintain its percentage share of the product then it must record a rise of two to three percentage points in relation to the G.N.P. denominator.

Secondly, direct taxes included within Feinstein's definition of labour income were also increased during this time and by 1922 had risen to at least the equivalent of 2.5 per cent of the G.N.P. so that some two percentage points of the rise noted by Feinstein may be attributable to the effects of increased direct taxation.

Thirdly if the cycle hypothesis with a trough in 1913 is accepted then the period under review falls entirely within an upswing.

Table 4 shows, for the period from 1935 to 1963, the five-yearly averages of labour income as a percentage of G.N.P. calculated by Feinstein. As will be described later, these results can be compared to the CSO's latest corrected estimates.

Column (iv) of Table 4 records a rise of 4.1 percentage points from 1946-49 to 1955-59, so that in an upswing period of similar length, from 1910-14 to 1921-24, a rise of four to five percentage points may be attributed to the cyclical upswing movement.

In the circumstances that prevailed from 1910-14 to 1921-24, a rise of between 8 to 10 percentage points in relation to G.N.P. for labour incomes as defined by Feinstein must then be considered as consistent with the hypothesis of a near stationary secular trend for the take home pay share of the product. Feinstein's calculations recorded a rise of 11.2 percentage points over these years but since the annual estimates are subject to a margin of error of up to 10 per cent, this result is consistent with the hypothesis.

During the inter-war years Feinstein records that the labour share was relatively stable (8, p.115) and, as with pre-1913, this again was a period during which the G.N.P. percentages for taxes on expenditure and for direct taxes included within labour income exhibited no particular trend. Although social security taxation in particular was both increased in amount and extended in scope it is doubtful whether the sum of income tax and social security tax included in labour income varied by more than one half of one per cent of the G.N.P. over the sixteen years from 1922. Even in 1938, most employees were probably exempt from either social security or income tax and many remained exempt from both.

No significant trend is to be expected from the cycle hypothesis since, with troughs in 1913 and 1942, the years from 1921 to 1938 cover approximately the middle period. In fact, trend calculations from Feinstein's estimates result in opposite signs depending upon whether the denominator is based on income or expenditure data.

The weak rise during or immediately after World War II and the post-war upward creep (8, p.129) appears to be the result of causes similar to those which produced the big shift between 1913 and 1922. That the increase in labour income as a percentage of G.N.P. was much less between 1938 and 1946 than between 1913 and 1922 may be attributed to the different positioning of the cyclical trough within the two periods. In the earlier period the trough was most likely to have occurred in 1913, at the beginning, so that the resultant shift reflected an unbroken cyclical upswing. In the latter period, however, the trough probably occurred during the middle year of 1942, and thus the upswing and downswing cancel out.

In considering the tax effects on labour income for 1938 and from 1946 there is the great advantage over earlier years of having available the detailed and accurate (plus or minus three per cent) estimates prepared annually by the Central Statistical Office.

In Table 4 Feinstein's five-yearly averages for labour income expressed as a percentage of G.N.P. are given in column (i), whilst the percentages in the remaining columns are calculated from the CSO's latest corrected estimates. In column (ii), the numerator is income from employment (CSO Ref. 13) and, as may be seen by comparison with column (i), the exclusion of an estimate for self-employed labour income, whilst reducing the percentages, makes little difference to the variations over time. In column (iii), direct taxation is deducted from income from employment, and the result shows that most of the wartime upward shift may be attributed to an increase of income and social security taxes. In column (iv), the denominator takes into account changes in taxes on expenditure, and the wartime upward shift of 6.4 percentage points shown in column (i) then becomes a wartime downward shift of 3.6 points.

An immediate post-wartime 'upward creep' is reflected in both column (iii) and column (iv), but this tends to support the cyclical hypothesis since, following the peak of 1956-57, the averages for 1960-63 are lower than those for 1955-59.

With the advantage of more detailed and accurate data than for earlier periods it can be concluded with reasonable certainty that the wartime upward shift and the post-war upward creep in labour incomes as a percentage of the G.N.P. observed by Dr. Feinstein is entirely consistent with the hypothesis that the product share of take home pay has a near stationary trend, which is subject to long term cyclical movements.

This re-appraisal leads to the conclusion that rising taxation both direct and indirect offers a full explanation for the rising trend of the G.N.P. percentages for labour income that is in evidence from immediately prior to World War I. In particular, tax effects plus cyclical effects offer a reasonable explanation for the wartime shifts or faults that were left unexplained in Feinstein's paper and during the subsequent discussion at Palermo (8, p.143).

**Table 4**

**Five-year averages of labour income  
as a percentage of G.N.P. 1935-1963**

Period	(i) %	(ii) %	(iii) %	(iv) %
1935-38	58.9	58.4 *	55.2 *	50.0 *
1946-49	65.3	65.1	56.4	46.4
1950-54	65.3	64.8	57.3	48.4
1955-59	67.0	66.2	58.1	50.5
1960-63	67.4	67.1	57.5	49.6

\* 1938 only

- (i) Five-year averages of labour income (Feinstein)
- (ii) Income from employment (CSO Reference 13)
- (iii) Income from employment less direct taxation
- (iv) As column (iii) adjusted for taxes on expenditure

## IV

### Gross National Claims

The choice of the basic concept, that is the selection of the right denominator, is fundamental to any analysis of product shares.

John Dunlop experimented with a variety of alternatives when analysing labour's share but his work offers no statistical grounds upon which a decision might be based (10). Sweezy, however, has shown that to express the government's share as a percentage of the standard concepts used in the national income accounts will normally produce results of uncertain meaning if not obvious nonsense (11). He concludes that the share of government may be compared with national income only in an economy where there are no indirect taxes and no transfer payments. Such conditions have not existed in the United Kingdom for many centuries.

The purpose of most standard concepts used in national income accounting is to arrive at a value of goods and services becoming available to a nation in a given time period, usually one calendar year. The main aggregates are calculated either at market prices, which includes indirect taxes but excludes subsidies, or at factor cost, which excludes indirect taxes but includes subsidies. Since the effect of indirect taxes will be to reduce factor shares, whilst a subsidy increases the product share of the recipient factor relative to all other factors, it follows that the denominator to be used for calculating shares of the product, especially over a period of time, must take into account both subsidies and indirect taxation.

The effect of indirect taxes may be demonstrated by taking a hypothetical case of a firm producing and selling, in a given time period, 100 units at a price of £1,000 per unit in a no-tax situation.

Further, let it be assumed that there are only three claimants to the turnover of £100,000, with wages totalling £25,000, purchases from other firms totalling £50,000, and leaving a profit balance of

£25,000. These claims are the equivalent of wages, 25 per cent of production or 25 units; purchases, 50 per cent of production or 50 units; profits, 25 per cent of production or 25 units. If a sales tax of 25 per cent be introduced into this situation then, *cet. par.*, turnover will increase to £125,000 but wages will fall to 20 per cent or 20 units of output, and purchases will fall to 40 per cent of production or 40 units. Against this, gross profits will double in amount and as a share of the output will rise at first from 25 to 40 per cent. This is an illusory bonanza since, at some moment of time, the authorities will enforce their tax claim which is the equivalent of one half the gross profits so that, after tax, profits will fall in line with wages.

In the real world conditions are unlikely to be as simple as those assumed in the example given above, especially if, as it appears, the share of labour tends towards long term stability. Generally an indirect or expenditure tax with a narrow base will tend to cause a shift of resources out of those lines of production subject to the tax and into other lines not subject to tax. Such shifting however is no more than the method by which the effects of the tax are dispersed throughout the whole economy, motivated by the advantages that may accrue from tax avoidance in a particular case.

In aggregate, the reduction in factor shares to the product that will result from the imposition of an indirect tax can be minimised only to the extent that the yield of the particular tax is reduced. An all embracing, or general, indirect tax would not encourage such shifting of resources but even so its imposition must be expected to result in some restriction of production at marginal locations and in particular lines of production as these are rendered either relatively or absolutely unprofitable. In all cases the aggregate result is that an indirect tax, or a tax on expenditure, will reduce factor shares in proportion to its yield (12).

Whether or not there is any validity in the widely held opinion that indirect taxes may be, and in practice often are, passed on to final consumers of the product (13, p.102) is not relevant to the analysis of product shares.

In a closed economy in which net capital formation is zero it is clear that the consumers' share of goods and services becoming available can only be reduced by increases in the share purchased by public authorities. From the aspect of consumption, given that the public authorities' purchases are balanced by tax revenues, all taxes can be said to be borne by the consumer. Equally from the aspect of production all taxes can be said to be borne by the factors of production. The same penny has two sides.

The analysis of product shares, as distinct from consumption shares, must take its view from the aspect of production only and production is completed at the point the final consumer is reached. Indirect taxes then may be taken either as forming part of the tax revenue share of the product or included within the product share of the factor against whom the taxing authorities will in due course enforce their claim. For example a value added tax (VAT) may be considered as forming part, for the time being, of the share of the product of the immediate recipient factor or as forming part of the tax share. Some few taxes which are paid directly by consumers to the taxing authority, such as a dog licence, can only be considered as forming part of the tax share.

The most popular denominator for calculating the shares to the product is Gross National Product at factor cost (G.N.P.), although for reasons given above it must be considered generally unsuitable for the purpose. Unfortunately, G.N.P. has been given some official standing as a denominator by the Central Statistical Office who use it for international comparisons of tax revenues published annually in *Economic Trends*. In the CSO's *Sources and Methods*, however, it is emphasised that "the meaning to be attached to the aggregate of national income, product or expenditure is essentially arbitrary and limited" (6, p.15).

The G.N.P. is in fact particularly unsuitable for tax comparisons and the percentages obtained by its use as a denominator may be highly misleading. As indirect taxes are excluded from the G.N.P. it follows that if a given tax revenue is expressed as its percentage

then the result will vary directly with the proportion of indirect tax revenue to total tax revenue. Further, direct and indirect taxes are not such mutually exclusive and distinct classes as is frequently assumed and, in practice, the one class shades imperceptibly into the other; in marginal cases, the class allocation may be no more than an expression of the government statisticians' opinion. That such opinion is well grounded may perhaps be accepted, but it remains an opinion and opinions differ in different countries and at different times. The results obtained by expressing tax revenue as a percentage of G.N.P. will then depend both on political decisions as to the composition of taxes, and on a statistical opinion as to whether a particular tax should be classed as direct or indirect.

The differences that may arise as the result of statistical opinion are not insignificant. For example when selective employment tax (S.E.T.) was introduced in 1966, government statisticians decided on reasonable grounds that it should be classed as an indirect tax. It must be noted, however, that S.E.T., apart from the fact that in certain circumstances it may be reclaimed by employers, is very similar to the employers' contribution to social security. Both are poll taxes assessed on the number of employees, both fall due at the same time and are paid in the same manner. Indeed the national insurance card gives no indication as to the correct computation of the total employers' contribution as between the two taxes.

According to the 1971 *Blue Book* figures, total tax revenue for 1970 was £19,210 million and the G.N.P. was £42,819 million, but had S.E.T. been classed as a direct tax, then the figure for G.N.P. would have been increased to £43,669 million. Therefore, on *Blue Book* figures tax revenue was the equivalent of 44.9 per cent of the G.N.P. but, had S.E.T. been classed differently, then the same total tax revenue would fall to 44.0 per cent of the G.N.P.

On the other hand, if for consistency employers' social security contributions had been reclassified as indirect tax, G.N.P. would have been reduced to £41,464 million, thus increasing the total tax share to 46.3 per cent. Furthermore, a reasoned argument can be



put forward for classifying the whole of social security tax as an indirect tax, and if this were done then the G.N.P. in 1970 falls to £40,164 million, and tax revenue rises to 47.8 per cent of G.N.P.

Political decisions as to the choice of taxes significantly affect the result when any given tax revenue is expressed as a percentage of G.N.P. International comparisons, if they are not to be highly misleading, must make allowances for the fact that some countries, such as the United States of America and the Netherlands, raise less than 30 per cent of their total tax revenue by means of indirect taxes, whilst others, such as the United Kingdom and Canada, raise over 40 per cent of their tax revenue by indirect taxation.

For example, if a comparison is made between Denmark and Western Germany, then tax revenue (excluding capital taxes) as a percentage of the G.N.P. is slightly higher in Denmark. However, when a suitable allowance is made for the much greater reliance on indirect taxation in Denmark, it is found that the tax share is higher in Western Germany.

Expressing tax revenue as a percentage of G.N.P. may also be misleading when comparing changes over a period of time within one particular country. For the U.K. immediately preceding World War I, the yield from indirect taxes was some two thirds of total tax revenue, but by 1938 this had fallen to 52 per cent and by 1970 to 44 per cent. If in 1970 the composition of taxes had remained the same as in 1938, then the 1970 tax revenue as a percentage of G.N.P. would have been 46.5 per cent instead of 44.9 per cent.

The choice of a denominator for calculating the product shares becomes much easier if the differences between product shares and the national income concepts are made explicit.

National income aggregates, such as G.N.P., are constructed to give some information as to the 'wealth' available to a nation for consumption, investment, exports, and government purposes in a given time period. They also provide information as to the relative 'wealthiness' of a nation at various times, and may be useful for comparisons of 'wealthiness' as between nations.

Product shares do not give direct information that is useful for such purposes. If it were to be calculated that labour's share of the product in Puerto Rico is substantially higher than it is in the U.K., it would not follow from this that on average employees in Puerto Rico enjoy a higher standard of living, or are any 'wealthier', than their British counterparts. Similarly, a rise or fall in the share of the product accruing to labour in the U.K. would not give any direct information as to whether the standard of living of employees was rising or falling.

What any particular share of the product means in real terms depends not only on its relative size but also on the size of the total product from which it is drawn. In this context it is all too easily forgotten that 25 per cent of four oranges is one orange, whilst 50 per cent of two oranges remains just one orange. The direction of public authorities expenditure also affects the real worth of any given product share. If government expenditure is directed towards welfare projects designed specifically to benefit employees, then this will improve their standard of living for any given share of the product. The converse would be true if government expenditure is mainly for the benefit of those in receipt of property incomes.

Further, as will be argued later, tax revenue as a share of the product does not necessarily indicate the real burden of taxation, since it is reasonable to assume that what may be termed taxable capacity varies geographically with economic potential.

The aggregate used as the denominator must therefore accord with the basic concept of product shares as well as minimising any uncertainty as to interpretation that may be placed on the resulting percentages. Product shares refer to the division of the product that arises during the processes of production – processes, it must be emphasised, which are completed when the goods and services produced reach the final consumer. In a developed economy this division of the product is not commonly made in actual units of production but in monetary units which, from this aspect, represent claims to the product.

A suitable denominator may be termed Gross National Claims (G.N.C.) as this will indicate its relationship to the national income concepts without implying information as to 'wealth'.

For the purposes of this paper, the G.N.C. is taken as equal to the total domestic income before providing for stock appreciation and depreciation, plus net property income from abroad and taxes on expenditure. It is therefore equal to the sum of CSO References 8, 9, 13, 14, 15, 16, 17, 18, 19 and 23.

An alternative estimate of the G.N.C. may be obtained by using expenditure data, when it is the equivalent of the G.N.P. at market prices plus subsidies and stock appreciation. In this case, G.N.C. is equal to the sum of CSO References 1, 2, 3, 4, 5, 6, 10, 11 and 20, less reference 7.

For the years up to 1938, Tables 5 and 6 compare the results of using either income or expenditure based estimates of the G.N.C. as the denominator for the calculation of product shares. Table 5 shows the calculated product share percentages from 1870 to 1913, and Table 6 shows the product shares from 1922 to 1938.

From 1938 onwards the alternative expenditure-based estimate is not used in this paper, since there is no clear evidence as to the superior accuracy of either method, and the difference between the two totals (CSO Reference 21) never exceeds a fraction of one per cent in the resulting product share percentages.

For earlier years when the margins of error are often significant, both methods of estimating G.N.C. are used and recorded in Tables 5 and 6. The error percentage given in both Tables 5 and 6 refers only to the difference between the two methods of calculation of the G.N.C. and not to the margin of error contained in the original national income estimates.

The determination of the enumerators used in Tables 5 and 6, and in later tables for the years from 1946 to 1971, is discussed in the next section.

**Table 5:1****Shares in the national product, 1870-1899**

Year	Income based			Expenditure based			Error %
	(i) %	(ii) %	(iii) %	(iv) %	(v) %	(vi) %	
1870	40.3	51.9	7.8	37.1	47.7	7.2	8.0
1871	39.6	52.8	7.6	36.3	48.5	7.0	8.2
1872	41.8	50.8	7.4	38.1	46.3	6.7	8.9
1873	42.6	50.4	7.0	39.8	47.0	6.5	6.7
1874	42.4	50.7	6.9	39.8	47.6	6.5	6.1
1875	42.6	50.3	7.1	40.0	47.2	6.6	6.2
1876	42.9	49.7	7.4	40.1	46.6	6.9	6.4
1877	43.3	49.2	7.5	40.7	46.1	7.1	6.1
1878	43.0	49.0	8.0	39.8	45.4	7.4	7.4
1879	43.3	48.7	8.0	41.2	46.4	7.6	4.8
1880	42.5	49.7	7.8	38.1	44.6	7.1	10.2
1881	42.3	49.9	7.8	39.3	46.3	7.3	7.1
1882	43.5	48.7	7.8	40.7	45.6	7.3	6.4
1883	44.2	47.9	7.9	40.9	44.3	7.3	7.5
1884	43.8	48.0	8.2	40.3	44.2	7.5	8.0
1885	43.1	48.5	8.4	40.1	45.1	7.8	7.0
1886	42.3	49.3	8.4	39.9	46.6	7.9	5.6
1887	42.9	48.9	8.2	40.5	46.1	7.7	5.7
1888	43.1	49.3	7.6	41.8	47.7	7.4	3.1
1889	44.3	48.3	7.4	44.3	48.2	7.4	0.1
1890	45.2	47.4	7.4	45.2	47.5	7.4	- 0.1
1891	45.5	46.8	7.7	44.7	46.0	7.5	1.8
1892	46.3	45.8	7.9	44.8	44.4	7.6	3.2
1893	46.1	45.8	8.1	44.5	44.3	7.8	3.4
1894	44.5	47.6	7.9	44.3	47.3	7.8	0.6
1895	44.6	47.2	8.2	45.1	47.7	8.3	- 1.1
1896	45.0	46.6	8.4	45.0	46.5	8.3	0.2
1897	44.5	47.3	8.2	44.6	47.4	8.3	- 0.3
1898	44.5	47.5	8.0	44.7	47.7	8.1	- 0.5
1899	44.0	47.8	8.2	43.5	47.4	8.1	1.0

**Table 5.2****Shares in the national product, 1900-1913**

Year	Income based			Expenditure based			Error %
	(i) %	(ii) %	(iii) %	(iv) %	(v) %	(vi) %	
1900	45.0	46.5	8.5	42.3	43.8	8.0	5.9
1901	45.2	45.4	9.4	41.7	41.8	8.7	7.8
1902	44.3	45.8	9.9	41.0	42.4	9.2	7.4
1903	45.1	45.0	9.9	41.9	41.8	9.2	7.1
1904	44.5	45.5	10.0	40.8	41.6	9.2	8.4
1905	43.7	46.5	9.8	40.4	42.9	9.1	7.6
1906	43.3	47.3	9.4	40.8	44.5	8.9	5.8
1907	44.0	47.0	9.0	42.2	45.0	8.7	4.1
1908	44.4	46.3	9.3	42.6	44.4	8.9	4.1
1909	44.2	47.2	8.6	41.7	44.5	8.1	5.7
1910	44.1	45.2	10.7	41.6	42.7	10.1	5.6
1911	43.9	45.9	10.2	41.4	43.3	9.7	5.6
1912	43.6	46.3	10.1	41.8	44.4	9.7	4.1
1913	43.4	46.3	10.3	41.3	43.9	9.8	5.0

(a) Income based estimates:

- (i) Wages and salaries
- (ii) Property income
- (iii) Tax revenue

Columns (i), (ii) and (iii) sum to 100%.

(b) Expenditure based estimates:

- (iv) Wages and salaries
- (v) Property income
- (vi) Tax revenue

**Table 6****Shares in the national product, 1922-1938**

Year	Income based				Expenditure based				Error %
	(i) %	(ii) %	(iii) %	(iv) %	(v) %	(vi) %	(vii) %	(viii) %	
1922	48.8	2.6	25.1	23.5	45.6	2.4	23.5	22.0	6.5
1923	47.9	2.3	28.0	21.8	45.2	2.2	26.4	20.6	5.6
1924	48.4	2.3	29.0	20.3	46.0	2.2	27.5	19.3	5.0
1925	48.8	2.3	28.8	20.1	45.9	2.1	27.1	18.9	6.0
1926	48.1	2.3	29.0	20.6	45.5	2.2	27.4	19.5	5.4
1927	48.6	2.2	29.2	20.0	46.5	2.1	27.9	19.1	4.4
1928	48.1	2.1	29.7	20.1	45.8	2.0	28.3	19.1	4.8
1929	48.3	2.1	30.0	19.6	46.5	2.1	28.8	18.9	3.7
1930	48.5	2.2	29.2	20.1	47.2	2.2	28.4	19.5	2.7
1931	48.6	2.3	27.6	21.5	47.2	2.2	26.8	20.8	3.0
1932	49.1	2.3	25.2	23.4	47.7	2.3	24.5	22.7	2.8
1933	48.3	2.2	27.5	22.0	47.8	2.2	27.1	21.8	1.1
1934	47.8	2.2	28.8	21.2	47.4	2.2	28.6	21.1	0.7
1935	47.2	2.2	30.2	20.4	46.8	2.2	29.9	20.2	0.9
1936	46.8	2.1	31.2	19.9	46.9	2.2	31.3	19.9	-0.3
1937	47.0	2.2	30.6	20.2	46.6	2.2	30.4	20.0	0.8
1938	47.8	2.3	28.9	21.0	46.7	2.3	28.2	20.5	2.3

(a) Income based estimates:

- (i) Take home pay
- (ii) Other income
- (iii) Property income
- (iv) Tax revenue

Columns (i), (ii), (iii) and (iv) sum to 100%.

(b) Expenditure based estimates:

- (v) Wages and salaries
- (vi) Other income
- (vii) Property income
- (viii) Tax revenue

## V

**The Enumerators**

In practice and from a theoretical standpoint the primary division of the product is between labour and property, but in an empirical study such a division creates difficulties. To make this primary division it is necessary to allocate taxes on expenditure and income from self-employment as between labour and property which from the nature of published data must be a very approximate process. If the analysis is then to be taken further so that after tax shares may be considered, a quite arbitrary division is then required in respect of taxation included in the wage imputed to the self-employed. To follow theory in this matter must inevitably increase the margin of error. In this paper, as a direct consequence of the limitations of the published estimates, the first division of the product is therefore made into four parts: civilian employees, property, tax and other.

The enumerator for calculating the civilian employees' share is taken as wages and salaries (CSO ref. 13a), less income tax and employees' contributions to social security tax; that is, *take home pay*. Pre-World War I wages and salaries are assumed to be the same as take home pay. The share of take home pay is less than the after tax share of labour since the enumerator excludes the pay and allowances of the armed forces and an imputed wage for the self-employed. During the peace time years for which it is possible to make estimates, the exclusion of forces pay is unlikely to make any significant difference to any conclusions that might be drawn in respect of the share of labour, but the exclusion of the labour element of self-employed income must be expected to have some influence on long term trends. Over the past hundred years there has been a steady drift from self-employed status to that of the employee, and this change must be expected to exercise a positive influence on the long term trend for the share of take home pay

accruing to employees. In America it has been found that imputing a wage to self-employment tends to reduce the rising trend in labour's share which some researchers have observed (14, 15).

The significance of the employees' share as represented by take home pay is that it arises from the human relationship between employer and employee and this relationship is fundamental in a modern developed economy. It is also of first importance to the formulation and execution of economic policy.

The enumerator for calculating the product share of *property* is taken as the sum of income from self-employment (CSO ref. 14), the gross trading profits of companies (CSO ref. 15), gross trading surplus of public corporations and other public enterprises (CSO refs. 16, 17 and 18), rent (CSO ref. 19), and net property income from abroad (CSO ref. 23); less income tax and employers, self-employed and non-employed contributions to social security tax, and capital taxes.

It was decided to treat capital taxes as a direct tax on property income since in general any tax, however assessed, is paid by the transfer of current claims to the taxing authority. An exception does arise in the case of an insignificant proportion of U.K. death duties which are cleared by the transfer of title to the capital asset itself to the central government or its nominee. In accordance with the United Nations system of national accounting both U.K. death duties and capital gains tax must be classed as capital transfers for national income accounting purposes since, in so far as the payee is concerned, they are irregular unrequited transfers. To accept this ruling when analysing shares to the product could however lead to some strange results.

Whether individual taxpayers meet capital taxes out of current income, from the proceeds of the sale of capital assets, or by some means such as life assurance, meeting the liability to such taxes is in aggregate the equivalent of an annual reduction in the after tax property income. Equally the aggregate yield of capital taxes tends to be a regular annual increment to the tax revenue. The effect of



capital taxes in aggregate therefore is similar to the effect of other direct taxes on property income.

The total tax revenue of both central and local government is the numerator used for calculating the share of *taxation*. Total tax revenue is taken to be the sum of taxes on income (CSO ref. 49), taxes on expenditure (CSO refs 8 and 9), social security tax (CSO ref. 33), and capital taxes.

Whilst for political purposes it may be common to distinguish between social security contributions and general taxation, many economists today, such as Wheatcroft, hold that to consider social security contributions as being a form of insurance is no more than political dressing lacking in economic significance. In the United Nations system of accounting, social security taxes are simply a sub-class of direct tax. In this study it is agreed with Wheatcroft that the contributions are a current tax to meet current needs (16).

As the G.N.C. is used as the denominator, the tax share of the product is not affected by varying the composition of taxes.

The numerator for the residual product share, or *other income*, is the sum of pay in cash or in kind of H.M. Forces (CSO ref. 13b), plus other employers' contributions (CSO ref. 13d), less income tax and social security taxes. In the primary division of the product this residual item would form part of the share of labour.

For the years 1946 to 1971, Tables 7 and 8 show the calculation of product shares using the G.N.C. as the denominator. Table 7 shows the calculated product share percentages of *take home pay, other income, property, and tax*. Table 8 shows employers' labour costs and employment impact taxes expressed as a percentage of the G.N.C. This latter aspect will be discussed in the next section.

**Table 7****Shares in the national product, 1946-1971**

Year	Take home pay %	Other income %	Property income %	Tax revenue %
1946	41.6	6.6	17.6	34.2
1947	42.6	4.8	21.0	31.6
1948	43.5	3.3	20.7	32.5
1949	44.1	3.2	19.4	33.3
1950	43.0	3.3	22.7	31.0
1951	43.2	3.6	23.0	30.2
1952	45.6	4.0	19.1	31.3
1953	46.1	3.9	19.9	30.1
1954	46.0	3.8	21.1	29.1
1955	46.6	3.7	20.8	28.9
1956	47.1	3.9	20.9	28.1
1957	47.1	3.8	20.6	28.5
1958	46.5	3.9	20.3	29.3
1959	46.1	3.8	21.3	28.8
1960	45.9	3.7	23.1	27.3
1961	46.3	3.6	21.6	28.5
1962	46.0	3.6	20.7	29.7
1963	45.7	3.7	22.0	28.6
1964	45.3	3.6	22.7	28.4
1965	44.4	3.5	22.5	29.6
1966	44.1	3.8	21.1	31.0
1967	43.4	3.8	20.5	32.3
1968	41.9	3.6	20.6	33.9
1969	41.2	3.7	19.7	35.4
1970	41.4	3.7	18.5	36.4
1971	42.0	3.7	19.2	35.1

**Table 8****Shares in the national product, 1946-1971**

Year	Employers' labour costs %	Employment impact taxes %
1946	47.5	12.0
1947	48.0	12.0
1948	49.4	12.7
1949	50.5	13.0
1950	49.1	12.2
1951	49.4	12.4
1952	51.9	12.7
1953	52.1	12.3
1954	51.8	12.1
1955	52.8	12.4
1956	53.6	12.7
1957	53.8	12.9
1958	54.0	13.6
1959	53.5	13.4
1960	53.3	13.3
1961	54.5	14.1
1962	54.7	14.7
1963	54.0	14.1
1964	53.9	14.4
1965	53.9	15.5
1966	55.1	16.9
1967	54.7	17.1
1968	54.1	18.1
1969	54.1	18.9
1970	55.1	19.7
1971	55.2	19.2

## VI

### **The Shifting of Employment Impact Taxes**

The hypothesis that the share of the national product represented by the take home pay of civilian employees has a near stationary secular trend, subject to long term cyclical fluctuations and with troughs in 1881, 1913, 1942 and 1969, fits the data published by Phelps Brown and Hart (5). It offers reasonable explanations to the questions raised in the discussion on Feinstein's paper at Palermo (8), but it gains little confirmation from the percentages given in Tables 5, 6 and 7.

From an inspection of the continuous series in the first column of Table 7 the possibility of a cyclical movement is strong, but the period from 1946 through to 1971 is ill-fitted for the calculation of a secular trend. The hypothesis is not refuted but confirmation will almost certainly have to wait until the early 1980s.

Again, the period from 1922 through to 1938 given in Table 6 is too short for drawing conclusions with any degree of confidence. All that can be said about this period is that, after allowing for the margin of error, the product share percentages are not inconsistent with what might be expected over the peak years of a cycle having troughs in 1913 and 1942.

Continuous data is available for the pre-World War I cycle prior to 1913 and is shown in Table 5, but the margins of error in the original income and expenditure estimates are such as to give low credibility to any conclusions that may be drawn.

Calculating by the least squares method, the secular trend for a cycle with troughs in 1881 and 1913 produces a result with income data of  $y = 44.03 + 0.013x$ . A similar calculation with expenditure data for a cycle with troughs in 1880 and 1913 produces the result  $y = 41.96 + 0.017x$ . These results do suggest a slowly rising trend, which is consistent with the hypothesis.

A comparison of arithmetic means indicates that over the past century there has been a near insignificant rising trend in the share of take home pay. For the income data cycle of 1881 through to 1913 the arithmetic mean is 44.24. For the expenditure data cycle of 1880 to 1913 it is 42.24 whilst post-World War II data yields an arithmetic mean of 44.50 percentage points.

Although the evidence currently available does not confirm the cyclical and stationary secular trend hypothesis in respect of the take home pay share of the product, it does give it some support. Certainly the evidence presented in Tables 5, 6 and 7 does not refute the hypothesis, and in these circumstances such fruitfulness is the warrant for continued acceptance.

If it is accepted that the secular trend of the employees' share is indeed stationary, then it follows that over a full cyclical phase the incidence of a change in taxation having an impact on employment incomes must be shifted on to employers. That is to say, a positive relationship must be expected as between the shares of what will be termed *employers' labour costs* and *employment impact taxes*.

Further, since it is being hypothesised that, cyclical fluctuations excepted, the share of take home pay is a constant, then it follows that there will be no statistically significant relationship between changes in employers' labour costs and take home pay.

In the U.K. employment impact taxes consist of income tax on wages and salaries, employers' and employees' total social security contributions, Selective Employment Tax (S.E.T.) and a proportion of taxes on expenditure determined by the percentage share of take home pay.

Employers' labour costs are equivalent to wages and salaries, plus employers' social security contributions, and S. E. T.

Table 8 shows employers' labour costs and employment impact taxes as shares of the G.N.C. for the years 1946 to 1971 inclusive. The percentages in Table 8 yield a correlation coefficient of + 0.67 and there is a strong linear relationship between the variables, with a true regression coefficient between + 0.63 and + 1.40.

In Tables 7 and 8, the correlation between employers' labour costs and take home pay is not significant, and there is no linear relationship. These results are consistent with the hypothesis that the secular trend of take home pay is stationary, and would also support the conclusion that the effective incidence of employment impact taxes is upon the employers.

The evidence also suggests that a change in employment impact taxes assessed upon employees is reflected in employers' labour costs with very little time lag, although this shifting in the short term may be obscured by cyclical fluctuations of take home pay.

These conclusions are contrary to the generally accepted view that the effective incidence of a direct tax falls upon the income receiver rather than upon the income payer (17, p.55), although Dalton introduced the qualification that "given full employment and strong trade unions, a tax on wages may be shifted forward on to prices" (17, p.58). This qualification must be objected to, since in practice an employee cannot shift a tax upon his income forward on to prices, but only on to his employer, to whom it appears as an increased labour cost. Admittedly the employer may be able, under certain conditions, to pass such increases on to his customers by raising prices, but each step in the chain is of importance.

If a direct tax imposed on employees is shifted forward on to employers who in turn pass on their increased costs by raising prices then the tendency would be for wages and salaries to be a stable share of the product, whilst the share of take home pay would decline.

Direct tax on employees' income has risen substantially during the past twenty-five years but as shown on Chart B it is wages and salaries that show the rising trend, with the trend of take home pay remaining relatively stable.

From the U.K. experience post-World War II it appears that not only have employees shifted increased taxes forward to employers, but they have also tended to obtain monetary pay rises sufficient to discount, in product share terms, higher prices.

Full employment does not appear to be a necessary condition for this process to continue since, over the recent years which have been marked by rising unemployment, the share of take home pay has risen by 0.8 percentage points. Possibly, strong trade unions are a necessary condition but this remains an open question as they have existed throughout the period for which detailed and accurate information is available.

Musgrave has also found it necessary to qualify the generally accepted view of tax incidence, and has recognised the possibility that certain classes of employees may shift additional taxation of their income onto their employers. He doubts, however, whether this is a major factor in wage determination (18, p.362).

U.K. experience over recent decades suggests that this shifting is general and therefore the presumption must be that taxes bearing on employees are a major factor in the determination of wages and salaries (19, p.66).

## VII

### **The Effective Incidence of Taxation on Property Income and Profits**

Obviously taxation cannot be shifted indefinitely, as it must in due course be paid by some person or corporate body. During the past hundred years the product share of taxation has multiplied some five times, and if the tax share expands, then the other shares must contract. Acceptance of the hypothesis that the effective incidence of employment impact taxes is shifted on to employers has as its corollary the hypothesis that the effective incidence of any change in the product share of taxation is on the product share of property income. The two hypotheses stand or fall together. Since this latter hypothesis implies that the two variables, tax share and property share, are fully interdependent, it then follows that their coefficient of correlation must approximate to unity, as must their coefficient of determination.

The percentages given in Tables 5, 6 and 7 provide 87 pairs of observations for the purpose of testing the relationship between property and tax shares over the 102 years from 1870 to 1971. For these 87 pairs of observations the coefficient of correlation has a value of  $-0.98$  giving a coefficient of determination of  $0.97$ . At two places of decimals the results obtained by using income data are the same as for those obtained by using expenditure data. Although an allowance must be made for discontinuity and margin of error in the original estimates, these results overwhelmingly support the acceptance of both hypotheses.

Assuming now the tax share to be the independent variable, the regression coefficient calculated using income data is  $-1.2$ , and on expenditure data,  $-1.1$ . This suggests that in the very long term the take home pay share of the product has a small and rising trend. Bearing in mind the known drift from self-employed to employee



status, this is consistent with a stationary trend for labour's share of the product.

However from the aspect of political economy such conclusions which rest on evidence over a period of 102 years are well fitted to receive the Keynesian admonition that in the long term we shall all be dead. In the United Kingdom the political long term is bounded by a Parliamentary life of five years, with decades tending to be obscured by the more immediate problems associated with the next general election. Events of some forty or fifty years ago may well, through their emotive power, influence current policy decisions but factual evidence over such a period of time is likely to be overlooked. Further in the political jargon of the second half of the twentieth century property income tends to be a term of abuse and the prospect of its elimination by increased taxation a matter for political rejoicing rather than grave concern. Perhaps paradoxically attitudes in politics frequently appear to be governed by battle lines drawn in the distant past.

Today, what has been defined in this paper as the product share of property income is very largely profits. In an open economy that relies to any marked extent on international trade and the interplay of market forces, profits are a determining factor for the level of production, growth and employment, and the general standard of living. The important question for political economy is whether the effective incidence of taxation at its current level is such as to depress after-tax profits to such a great extent that new investment, production and employment are all restricted, to a degree that has become incompatible with a rising standard of living.

For the purpose of answering such a question it would be ideal to limit profits to after-tax trading incomes and company profits of the private sector, but the changes over recent decades as a result of political decisions plus the limitations imposed by available published information make it impossible to produce a meaningful continuous series on such a basis. Since 1945 many private sector firms have been nationalised, some of them only to be returned to

the private sector by a Conservative government in the period from 1951 to 1964, and then once more to become public corporations. Other former public enterprises, such as the Post Office, have been converted into public corporations, whilst at local level, numerous extensions and contractions have occurred in the trading field. As has already been mentioned, any advantage that might be gained from estimating an after-tax profit for self-employment is more than offset by the increased loss of accuracy.

In order to produce a comparable series over as long a time as possible, the term *home profits* is taken as including income from self-employment, the trading profits of companies, and the trading surpluses of public corporations and other public enterprises, after allowing for direct taxation and stock appreciation, but before depreciation. The only item included within home profits that does not partake of the nature of profits is some part of self-employed income. The adoption of this wide definition probably results in understating the decline in trading profits which has taken place over recent years. In particular, self-employed incomes have risen faster than company profits, and a reasonable case can be made for concluding that an increasing proportion of this is akin to wages and salaries, rather than accruing as a result of capital employed.

However whilst the probability of understating the decline must be borne in mind, there is no reason to assume it is of a magnitude to significantly alter any conclusions that may be drawn.

In Table 9 taxation and home profits as defined above are each expressed annually as a percentage share of the G.N.C. for the years 1946 to 1971 inclusive. The basis of the tax percentages is different from that used for Table 7, as direct taxes assessed upon members of the armed forces and central government employees concerned with public administration are excluded. To the extent that employees shift direct taxation onto their employers, when the employer is also the taxing authority, this becomes in effect a self-cancelling book transaction, and it is difficult to conceive how the incidence of such taxes could possibly be shifted on to profit.

**Table 9****Shares in the national product, 1946-1971**

Year	Profits %	Taxation %
1946	14.2	33.6
1947	14.3	31.2
1948	15.4	32.1
1949	15.5	32.9
1950	13.8	30.7
1951	14.6	29.8
1952	15.8	30.9
1953	16.6	29.7
1954	16.8	28.7
1955	16.4	28.6
1956	16.1	27.7
1957	15.8	28.1
1958	15.7	28.9
1959	16.5	28.3
1960	18.4	26.9
1961	16.6	28.1
1962	15.4	29.3
1963	16.6	28.2
1964	16.9	27.9
1965	16.5	29.1
1966	15.3	30.5
1967	14.7	31.8
1968	14.1	33.2
1969	12.6	34.8
1970	11.2	35.7
1971	12.2	34.4

# GROSS NATIONAL PROFITS and TAX REVENUE

As percentage of Gross National Claims

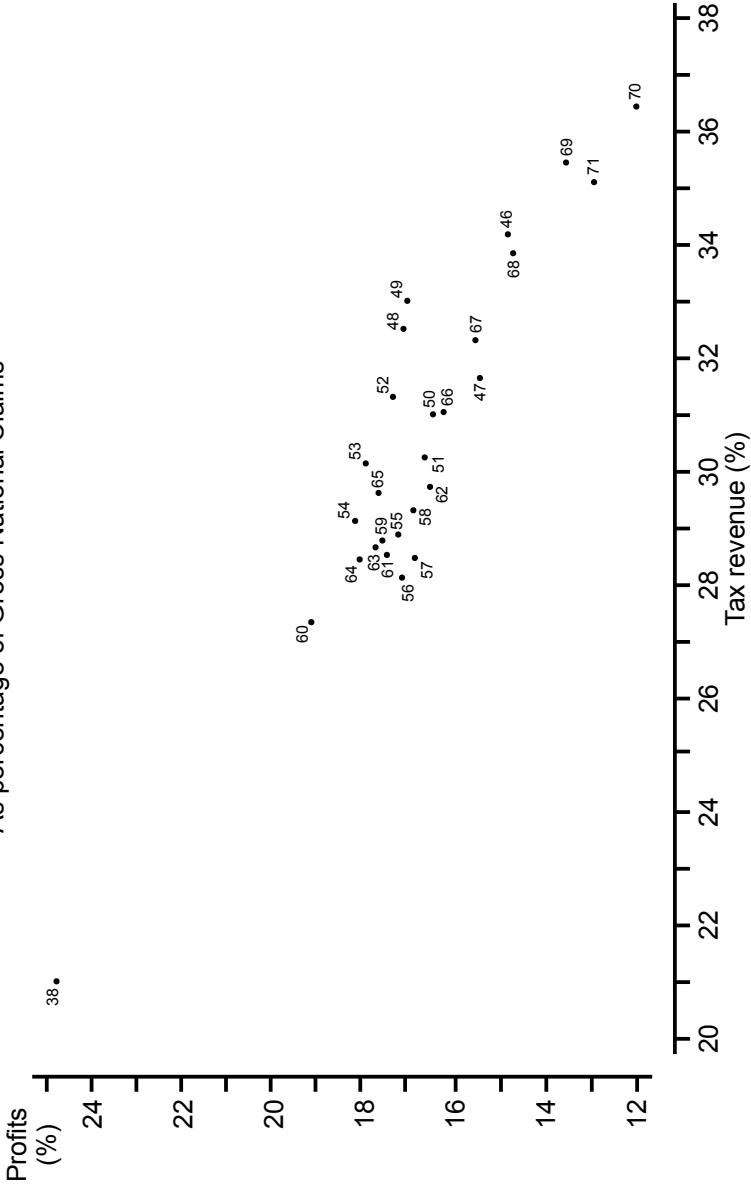


Chart C

Calculations confirm that a linear relationship exists between the two variables and yield a correlation coefficient of  $-0.88$ . The degree of relationship that has been shown to exist indicates that from 1946 onwards some 78 per cent of the variation in the share of home profits can be 'explained' by variations in the percentage share of taxation, and this remains true when the definition of profits is extended to include income earned abroad.

On Chart C are plotted the relationships between gross national profits and total tax revenue, both expressed as percentages of the G.N.C. for the years 1938 and 1946 to 1971 inclusive. As may be seen there is a strong linear relationship but the inclusion of 1938 in the calculation gives a correlation coefficient of  $-0.93$ . This means that for the 27 plots on Chart C, 86 per cent of the variation in profits may be 'explained' by variations in the tax share. These results lead to the conclusion that at present levels of tax the major part of any increase or decrease in tax revenue will affect profits.

The depressive effects of taxation at current levels upon profits becomes even more startling when allowance is made for capital consumption and the value of physical increase in stocks and work in progress. After such adjustments an estimate for the share of the product of what can be described as *disposable home profits* is, in 1970, only 3.6 per cent – a decline from 7.0 per cent in 1968, and from 9.0 per cent in 1965. There is a slight recovery to 5.0 per cent recorded for 1971.

From the nature of national income accounts, these percentages include subsidy payments. When a suitable deduction is made for subsidies, other than housing subsidies, there is a further decline of about a percentage point. In 1965 the share of the product accruing to earned disposable home profits was 8.0 per cent; in 1968 5.5 per cent; in 1970 2.6 per cent, with a recovery to 4.0 per cent in 1971.

Myddelton has recently concluded that British companies have been suffering from money illusion for some years, and that their average retained profits in real terms are probably negative, with some dividends being paid, in part, out of capital (20).

This analysis of product shares supports his conclusion, as an estimate for after-tax dividend and interest payments by companies in 1970 yields a product share of over four per cent which is more than estimated total disposable home profits. Although no great accuracy may be claimed for such estimates since the definition of home profits is wide, it is safe to assume that the share of the product of companies' disposable profits is less than the estimates given above. In the circumstances there can be little room for doubting that over recent years taxation has largely removed any incentive to expand production in the United Kingdom and in many cases must have removed both the incentive and ability to even continue production.

The evidence points very definitely to the conclusion that tax at current levels is appropriating the funds required by trade and industry for replacements and new investment. Subsidies and grants cannot replace funds arising from the ordinary course of business. The situation as it now exists is incompatible with a continuing rising standard of living and if allowed to develop will endanger even the maintenance of the present general standards.

## VIII

### **The Economic Upper Limit and Taxable Capacity**

In an economy such as exists in the United Kingdom it is self-evident that the system must break down as the share of disposable home profits approaches zero. In 1970 this extremity was all but reached. Colin Clark has suggested that well before reaching such an extremity there exists an 'economic upper limit to taxation' which, on the basis of experience in many countries both before and after the second world war, he put at about 25 per cent of the net national income (21, 22).

He concluded that if tax revenue plus deficit was maintained above this limit then a general rise in costs and prices as well as checks to production were inevitable within two to three years.

During the whole of the post-war period tax revenue in the United Kingdom has been maintained at levels far exceeding Clark's 25 per cent limit and in 1971 tax revenue plus borrowing requirement exceeded 50 per cent of the net national product. It is common knowledge that throughout the post-war years the British economy has been plagued with a sluggish rate of growth and a persistent rise in costs and prices.

This study concludes that Clark's empirical 'law' stems from the fact that the effective incidence of total taxation is upon property income, which in most developed economies is almost synonymous with profits. Outside of a fully controlled economy the share of disposable profits cannot be reduced to zero for any length of time without a breakdown in the system, but well before such an absolute point is reached other forces are set in motion, the results of which were observed by Clark. As the share of the product appropriated by taxation expands beyond a certain limit some producers will find their profit margins being reduced to

below an acceptable level, and will react by attempting to raise their prices in an effort to restore their position. If higher prices are unacceptable in their market then some will go out of business and the check to production will allow some increase in price.

Generally, high taxation goes along with excessive government expenditure and a seller's market. The continuation and expansion of the process will result in a general tendency for costs and prices to rise. In the U.K. where over 50 per cent of the tax revenue is now derived from employment impact taxes, a major part of the expanding tax share squeezes profits by inflating labour costs, and as a consequence the resulting inflation is ascribed to excessive wage demands; that the inflationary forces have been generated by increased taxation passes unobserved.

Although the analysis of product shares supports Colin Clark's findings so far as the existence of an economic upper limit to taxation is concerned, this support does not extend to his suggested figure of 25 per cent. It has already been argued that to express tax revenue as a percentage of the G.N.P. will give misleading results, and the same arguments apply with even greater force when the denominator is the net national income.

For example, since in the year 1971, the U.K. tax revenue plus deficit was the equivalent of 50.1 per cent of net national income, it seems reasonable to conclude that a reduction by about a half would have been sufficient to come within Clark's upper limit.

However, such a conclusion is valid only if it were possible to limit the entire reduction to taxes on expenditure. Such are the vagaries of expressing tax as a percentage of net national product that if it were decided, assuming it to be possible, to limit all the reductions to direct taxes then, in 1971, tax revenue required a cut of some two-thirds to come within the equivalent of 25 per cent of the net national product. As tax revenue in 1971 was apportioned 55 per cent direct tax and 45 per cent taxes on expenditure, both extremes fall well outside the bounds of possibility. Further, Colin Clark's exposition implies a general all-pervading limit, whereas it



is to be expected, as will be argued, that the economic upper limit to taxation will vary from time to time and place to place. It seems probable that the figure of 25 per cent owes more to an accident of statistical averages than to economics.

Colin Clark has also demonstrated, in his work on the location of industry, that there do exist definite and quantifiable economic differences between geographical areas, and these he has measured in arbitrary units and described as economic potential (23, 24, 25).

Investigation reveals that the contour lines of potential maps delineate with a fair degree of accuracy not only the areas of economic growth but also the stagnant and declining areas. Clark has shown that this is not only true for Great Britain but also for Western Europe (25).

It is reasonable to assume that areas which sustain an above average rate of economic growth are also areas in which profits tend to be above average. That trade and industry will be attracted towards the most profitable locations available is to be expected and governments spend a great deal of public money attempting to counter this attraction. Retained profits are also an important source of finance for expansion and re-equipment whilst it is an economic fact of life that the more profitable a company the better able it is to attract funds on the open market. Profitable locations therefore are likely to be, by multiple forces, locations at which the rate of expansion is above average. Prosperity both encourages and breeds prosperity. Equally it is to be expected that the stagnant and declining areas will be those in which profits tend to be below average or non-existent.

If it is accepted that there is a positive relationship between the prosperity and rate of economic growth of any given area, and its profitability as a location for trade and industry, then it follows from Clark's demonstration that economic potential is a measure of relative prosperity and growth, and that economic potential is also a measure of relative profitability. That is to say, the higher the potential, the larger will tend to be the profits relative to other

areas. Since it has been concluded that in conditions as they exist in the U.K. at the present time the effective incidence of taxation is upon profits, then it also follows that economic potential is a measure of relative taxable capacity (19, Chapter V).

As a share of the product taxable capacity must equal the sum of the tax share and the share remaining to disposable profits. The maximum total share of the product that may be appropriated by taxation (taxable capacity) for any length of time in any political entity will bear a direct relationship to the average economic potential of its geographical area and this will vary from country to country. An exception is in a dictatorship with a fully controlled economy where it may be possible to increase tax revenue and expand taxable capacity by depressing wages.

The precise relationship between taxable capacity and the economic upper limit to taxation in any country will depend on the tax system that is being operated. If the system is regressive in relation to economic potential, that is higher tax payments at lower potentials, then the gap will tend to be wide. A proportional system (in this context the higher the potential the higher the tax payment) will tend to narrow the gap between the economic upper limit to taxation and taxable capacity. In Britain some taxes such as petrol tax are definitely regressive in their incidence whilst others such as corporation tax have some tendency towards being proportional, but in all cases the incidence is approximately uniform, with tax liabilities having no direct relationship with economic potential.

The effect of different tax systems upon the relationship of the economic upper limit to taxation and taxable capacity may be seen from Figure 1, in which economic potentials are measured along the horizontal axis, here reducing from left to right, and disposable profits along the vertical axis. The downward sloping curve A-A defines the limits of taxable capacity. A country with economic potentials extending from *a* to *b* will have a taxable capacity bounded by the area *a*, *b*, *c*, *d* and given a uniform tax incidence the economic upper limit to taxation will be bounded by *a*, *b*, *c*, *e*.



## IX

### Policy Implications

That excessive taxation is the primary cause of the inflation, stagnation and unemployment that is currently afflicting the British economy is the most important conclusion to be derived from the analysis that has been developed in this paper. From this it follows that an effective counter inflationary policy must include measures directed at reducing significantly the level of taxation. However, what would constitute a significant reduction in this context is not wholly dependent upon the size of the tax cuts. As may be deduced from Figure 1, a relatively small reduction in total tax revenue, if the effects are concentrated in the areas of low economic potential, will extend production and reduce costs to a much greater extent than a larger reduction spread throughout the economy.

Again, as was argued in the earlier paper (26), tax policy cannot be divorced from public expenditure policy, since it has become an accepted principle of public finance that expenditure determines the revenue required from taxation. In conditions where total tax revenue exceeds the economic upper limit to taxation, tax cuts that result in a budgetary deficit will at least maintain, if not increase, inflationary pressures. Equally, under such conditions, a budgetary surplus produced by raising taxes will inflate both prices and costs, whilst restricting production, trade and employment opportunities. The policy implications of the above analysis must therefore be considered in conjunction with public spending.

Chart D shows the relationship between central government income and expenditure for each year from 1961 to 1971 inclusive. Income is taken as current plus capital account receipts excluding transactions in financial assets. Over 90 per cent of annual income is revenue from taxation. Spending is current account expenditure, capital account expenditure on goods and services, capital grants,

and net lending to the private and public sector. Transactions for writing-off the debt of public corporations and transfer of liability for stock are excluded. Import deposits are considered as affecting net lending since, in effect, they are interest free loans to central government. The extent of annual net lending as defined above is shown on Chart D by a vertical line.

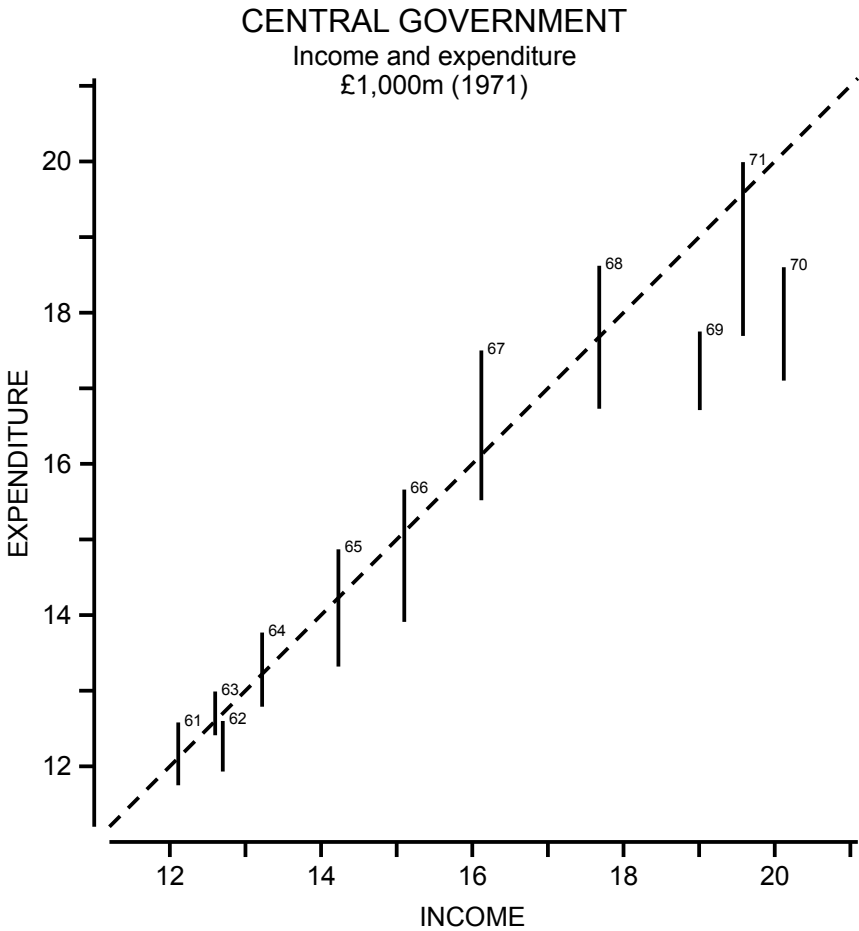


Chart D

Net lending is included within government spending since, as may be readily seen from the chart, it is an annual feature; and also because ordinary accountancy procedures in times of persistent inflation ensure that only a small part of the purchasing power of the original loan is ever repaid.

In addition, between 1961 and 1971 some two-thirds of total net lending by the central government was to public corporations, and during this time the equivalent of 30 per cent of this additional net lending was simply written-off. Yet, such calculations substantially understate the true situation. A loan of £500 million made in 1961 would be written-off by increasing capital transfers, say in 1971, by £500 million; government book-keeping does not show that the £500 million in 1961 is equivalent to about £780 million in 1971.

In real terms the government's income is shown increasing each year from 1963 through to 1971, especially after 1964, and this is consistent with the rising tax share shown by the percentages given in Table 7. The chart also shows that central government spending exceeded income in each year from 1963 to 1968 inclusive and by calculation, the marginal propensity to spend during this period is found to be 1.21. This result means that government was tending to inflate demand by an additional £1.21 of spending for every £1 of additional income, both being calculated in 1971 terms.

In 1969 and 1970 the situation was reversed and government income exceeded spending but since the rate of increase in income was only marginally reduced the inflationary pressure arising from excessive taxation was maintained. Aided by devaluation, this new twist produced large surpluses on the balance of payments at the cost of a stagnant economy, rising unemployment, and acceleration in the rate of decline of the internal purchasing power of sterling.

Upon election Mr. Heath's administration set out on a policy to reduce tax and restrain public spending, but managed only a small marginal success in the first of these objectives at the expense of complete failure in the second. A comparison of the 1970 and 1971 percentages given in Table 7 shows that take home pay and profits

made some slight recovery whilst the tax share declined, and this latter is confirmed by Chart D. It would appear that this general pattern continued through 1972. On the expenditure side, within a year of office, the new administration found themselves having to increase government spending in support of ailing industry, both public and private, and also through increased welfare payments to those hardest hit by continuing inflation and unemployment.

Early estimates suggest that in 1972 the attempt to restrain price increases and force economic growth by public spending produced a situation in which the product share of tax revenue, plus the excess of public spending over income, was higher than for any other year in the peace time history of the United Kingdom. On the assumption of current policies being continued, forecasts for 1973 suggest that this adverse trend will accelerate. For a time excessive government spending will result in an improvement in the rate of growth and in employment opportunities but these processes are reversed when the authorities are forced to tackle other economic difficulties that excessive spending inevitably creates.

The fundamental mistake of the present administration would appear to be that good intentions were not matched by appropriate action. A cut in company taxation, for example, is very welcome to all firms in a position to make profits, but it is of no assistance to private firms or public corporations who are making losses. As has been argued present tax conditions result in losses being endemic throughout the development areas of low economic potential. This outcome is regardless of the efficiency of individual firms and as a consequence substantial public expenditure is required to maintain production and employment. A cut in company taxation, therefore, whilst reducing the tax share and improving disposable profits in aggregate, does not reduce the demand for public expenditure and may well increase it. Similarly, a cut in the rate of income tax, however desirable, does not improve the pay of the lower paid and is likely to make even more insistent the demands for higher basic wages and for higher welfare payments.

Although a reduction in S.E.T. by reducing labour costs must to some extent increase employment opportunities and decrease the rate of price rises, the direct benefit will accrue to firms located in areas of relatively high economic potential. To firms located in the development areas a reduction in S.E.T. means little more than a marginal improvement in liquidity which must then be set against a worsened competitive position relative to firms located in the more prosperous regions. Overall the tax reductions that have been made since 1970 have not benefited the economy in general, nor have they offered relief where it was most required, and they are in some measure responsible for the increase in public spending.

All this however is now history, and in a difficult situation the government have found it necessary to take up statutory powers to depress prices and incomes below the level dictated by existing market conditions. When these powers expire, the difficulties will be intensified. The question of importance now, given the present conditions, is this: what are the policy implications for 1973 of the analysis developed on the previous pages?

With tax revenue plus deficit exceeding 90 per cent of taxable capacity and rising, it is clearly imperative that both tax revenue and public spending be reduced. The lessons of the past decade also make it very evident that these twin objectives must now be tackled simultaneously, otherwise the side-effects will prove to be self-defeating. The first question that requires an answer relates to the minimum sum that, in present circumstances, would constitute a significant tax reduction. From this the second question arises as to how these reductions should be applied bearing in mind the overriding need to cut public spending and to encourage economic growth by improving the competitive power of industry.

The information available outside of government departments allows only for a rough estimate in answer to the first question.

From published estimates and forecasts a cut in aggregate tax revenue at an annual rate of £4,500 million in 1973 appears to be the required order of magnitude.



On the basis of the 1971 national income estimates, the taxable capacity in that year was, in round figures, about £23,000 million of which tax revenue actually appropriated £20,000 million. The share of the product accruing to disposable profits was 4.6 per cent and if it is assumed that this share needs to be doubled to be the approximate equivalent of the 1960 share (when, incidentally, the annual growth rate was five per cent and inflation one per cent), then a reduction in tax of some £3,000 million is indicated. The share of take home pay in 1971 was however some four percentage points below its share in the early sixties, and is now on a cyclical upswing, which must be absorbed by a further reduction in tax.

Thus, on a 1971 basis, the total tax reduction required is about £4,000 million per year which, when translated into 1973 terms, approximates to £4,500 million per year. Whilst at first sight such a cut in revenue appears daunting, it is well within the bounds of political feasibility, and could be achieved by early 1974 with an actual reduction in gross tax revenue of £2,000 million coupled to a 'tax and public spending freeze' so that further increases of tax revenue are avoided.

This government, in common with its predecessors, has found that for short periods a wage freeze is politically feasible, so there appears to be no reason why, given the political determination, a public authority income and spending freeze should be considered an impossibility. So far as the electorate are concerned, there are good reasons for believing that a statutory tax and public spending policy would receive far wider support than a statutory prices and incomes policy.

In answer to the second question, the application of the 'pump priming' tax cuts is governed by the requirement to reduce taxes at the margin, that is in areas of low economic potential which today are mostly within the development areas. It is at the margin that a lowering of tax incidence will be the most effective in reducing inflationary pressures, improving profitability and making a saving on public spending.

These requirements point to making cuts only to employment impact taxes, so that the immediate effect is to lower labour costs.

Employment impact taxes have been defined in Section VI as S.E.T., part of taxes on expenditure, P.A.Y.E., and social security taxes. The government have already announced that S.E.T. will be abolished in 1973 but whilst this will help in general as has already been argued the effect in the development areas will be minimal.

The government have also intimated that the yield from V.A.T. which is to be introduced in April 1973 is expected to be less than the current yield of the taxes it is replacing, thus possibly reducing total revenue from taxes on expenditure. In this context however V.A.T. from its very nature and its wide base will tend to be more regressive in relation to economic potential and personal incomes than purchase tax, thereby negating any advantage gained from a reduction in yield. Although, as has already been noted, taxes on expenditure directly inflate labour costs it would clearly be a near administrative impossibility to introduce cuts with the selectivity that is required for the purpose in hand. Similarly, a cut in P.A.Y.E. would also lack the necessary selectivity.

This leaves for consideration only social security taxes, with a yield of £2,828 million in 1971. After recent increases this is now in excess of £3,000 million per annum. An immediate cut of one-half in social security taxes plus the reductions already announced for 1973 would give over a twelve month period remission in tax approximating to the £2,000 million per year suggested above as the minimum requirement for a 'pump priming' measure.

A cut in social security tax is a particularly effective method of achieving the purpose in hand since, being in essence a poll tax, it is highly regressive in relation to both economic potential and personal income. Since the 1930s, the highly regressive nature of local rates as currently assessed has been recognised as having a depressive effect on the peripheral areas and the government have already announced that to ease the local burden additional central grants will be made to local authorities in 1973. Clearly if the need

for these additional grants is accepted then there must be a much greater need for cutting social security tax, as it has a current yield nearly 50 per cent greater than local rates.

Given that the proposed tax reduction was apportioned equally between the employees' and employers' contributions an employee not now subject to P.A.Y.E. would receive an immediate and direct increase in take home pay to the full amount of the reduction in his contribution. This practical demonstration of government concern for the lower paid would assist their relations with the T.U.C. and take some of the heat out of industrial militancy. Labour costs would be reduced directly and immediately upon the reduction in the employers' contribution becoming effective, and the greatest benefit would accrue to labour intensive firms generally and to all firms located in areas of low economic potential. Not only would the lowering of labour costs reduce the rate of price increases, but the improved competitiveness of marginal firms would ensure that, through the normal operation of market forces, unavoidable price increases were kept to a minimum. A competitive market of many sellers is a far more effective instrument for price restraint than any scheme operated by the C.B.I. or government departments and takes effect at no cost to the Exchequer.

The gross reduction in revenue from the suggested cut in social security contributions is in a full year about £1,500 million, but the immediate net loss to the Exchequer would be far below this rate, and within twelve months should, given the political determination to carry through all the necessary ancillary and follow-up policies, allow for a reduction in the borrowing requirement.

So far as central government employees and the armed services are concerned the net cost to the Exchequer of a reduction in the employers' contribution will be nil since it amounts to no more than a book transaction; it is a payment by the government to the government. For any public corporation currently making losses that are met in one way or another by the central government, the net cost to the Exchequer will again be nil, as the reduction in the

employers' contribution will reduce its losses and therefore will in turn reduce the sum to be found by central government.

Local authorities will benefit by a reduction in costs and this will create further opportunities for central government savings. During the past two years a situation has arisen where more than half of local authorities' total current expenditure is met by grants from central government.

In the private sector a cut in labour costs would improve profitability, or reduce the rate of loss, amongst firms operating at marginal locations or in development areas, thus correspondingly reducing the need and the demand for grants or other assistance from the public authorities. Action of this nature is a prerequisite if the abolition of S.E.T. and the phasing out of R.E.P. is to mean anything other than a change in the form of subsidy.

On the employee side, since the lower contributions will raise take home pay, the loss of government income could be partly offset by savings in social welfare payments, whilst for the higher incomes there would be an increased liability under P.A.Y.E. The Government have apparently failed to recognise that a wage freeze automatically restricts their own income from P.A.Y.E. and almost as automatically increases public expenditure. The resulting effect is to increase inflationary pressures and to create the need for more tax revenue.

Although the several measures outlined above have as a prime objective the slowing down of the rate of price increases through a general reduction in labour costs, of equal importance is obtaining the maximum tax relief at the margin with the minimum of net cost to the Exchequer. By achieving these twin objectives, production and trade will be expanded and extended by means of strengthened competitive power, based on the sure foundations of an improved profitability in place of the shifting sands of public assistance.

The economic pressures leading to increased public expenditure must be relieved if a public authority spending freeze is to be carried through. In addition the government will also require some

easing in the political pressures to increase public spending. This will require the full co-operation of the trade unions, the support of back-benchers and the opposition parties in Parliament, as well as restraint on the part of pressure groups outside Parliament.

Whilst the analysis developed in this paper suggests that trade unions have not been successful in raising employees' take home pay as a share of the product there can be no doubt that they have played a full and important part in improving social conditions.

The necessity of improved social conditions must be admitted, but it must also be recognised that their achievement so far has led to profligate government spending requiring the excessive taxation which is at the root of present difficulties. It is the responsibility of the government now to bring home to the electorate that increased social welfare paid for out of the proceeds of higher taxes is, at this moment of time, self-defeating. In particular it must be emphasised that the rate of improvement in the general standard of living is already being reduced by high taxes inflating prices and restricting production, and this, if allowed to continue, must inevitably lead to an absolute decline in social welfare.

As a corollary to this it is essential that the trade unions should be granted both the freedom and the conditions in which they may concentrate upon improving the take home pay of their members.

Within a longer term strategy the 'pump priming' measures outlined above are limited to first relieving a dangerous situation and then setting the stage for a radical reform of public finance.

The objectives for the longer term must include the creation of conditions in which both earned incomes and profits may rise sufficiently for employees and employers to be independent of the need of any financial assistance from the public authorities.

Such conditions are essential if a freely elected government is to succeed in holding total public expenditure within the bounds dictated by the economic upper limit to taxation.

The full extent of what is entailed in creating these conditions is beyond the scope of this study, but the earlier analysis leads to the

conclusion that a fundamental requirement would be that spatially the effective incidence of total tax must be proportional to taxable capacity. From this it follows that taxes which are most regressive both in relation to incomes and economic potential must be either reformed or abolished.

In the tax structure of the U.K., the most regressive taxes in this sense are social security taxes and local rates.

The prime reason for proposing, as a 'pump priming' measure, a cut by one-half in social security contributions is that this is the only practical method by which the government may significantly and immediately relieve the pressure of tax at the margin, improve take home pay, and reduce labour costs, with only a small loss in net revenue. In the longer term, however, such is the regressive nature of the tax that there is no alternative but the abolition of the contributions in their present form.

The maintaining of a nominal contribution for psychological reasons may have some justification but, as has been argued, the tax as now levied is shifted by employees on to their employers.

Employees 'pay for' current welfare schemes indirectly through unemployment and the lower standard of living that results from a general lack of prosperity. That is to say, the North East 'pays' a lot, whilst the South East 'pays' only a little in relative terms.

A viable general social security, or welfare, scheme must surely be based on general prosperity, which for employees means secure employment yielding an ample amount of take home pay. Given this fundamental condition the way is open to isolate from the state scheme the actual insurance element which may then be made the responsibility, with statutory safeguards, of the private sector.

Should the community decide that, in addition to this insurance, it is to its own advantage, or it has a duty, or simply just so desires, to incur welfare costs in respect of particular persons, or classes of persons, then these costs should be met out of general taxation. It must be recognised however that the limit to such public spending is determined by the economic upper limit to taxation.

With grants from central government now the equivalent of all other local income and with local indebtedness increasing by some £1,500 million a year it is abundantly clear that the reform of local government finance is long overdue. The reform of the structure of local government that is now proceeding provides the opportunity, and the lines upon which the necessary financial reforms might be achieved were outlined by the author in a study published in 1970.

By an adjustment in the method of assessment, local rates could be made to yield sufficient in aggregate for local purposes without increasing the burden on householders and more importantly in the context of this paper, the incidence would become proportional to taxable capacity.

When a Conservative government was given office in 1970, the electors were of the opinion that Mr Heath and his colleagues intended to restrain inflation and to improve pay, production, and employment opportunities. The lesson of this detailed study is that the opportunity remains but the time is short. The sphere of action is in public finance, both central and local.

## References

The principal references (other than government publications, etc.) are listed here in the order in which they first appear in the text.

- 1 L. A. Dicks-Mireaux, *Cost or Demand Inflation?* Woolwich Economic Papers No. 6, Woolwich Polytechnic, London, 1965.
- 2 J. A. P. Treasure, *Public Opinion and Knowledge*. I.E.A. Readings 8, Institute of Economic Affairs, London, 1972.
- 3 J. M. Keynes, *Relative Movements of Real Wages and Output*. Economic Journal, March 1939.
- 4 Prof. Jan Pen, *Income Distribution*. The Penguin Press, 1971.
- 5 E. H. Phelps Brown & P. E. Hart, *The Share of Wages in National Income*. The Economic Journal, June 1952.
- 6 National Account Statistics, *Sources and Methods*. H.M.S.O. 1968.
- 7 P. E. Hart, *The Factor Distribution of Income in the U.K.* Studies in Profit, Business Saving and Investment in the United Kingdom, 1920-1962, Vol. 2 (ed. P. E. Hart), Allen & Unwin, London, 1968.
- 8 C. H. Feinstein, *Changes in the Distribution of the National Income in the United Kingdom Since 1860*. The Distribution of National Income, International Economic Association, Macmillan, 1968.
- 9 J. M. Keynes, *The General Theory of Employment, Interest and Money*. Macmillan and Co., London, 1936.
- 10 J. T. Dunlop, *Wage Determination Under Trade Unions*. 2nd edition, A. M. Kelley, Inc. New York, 1950. Ch. VIII, pp.149-191, Cyclical Variation of Labor's Share in National Income. (Dunlop was briefly a pre-war student of Keynes.)
- 11 Alan Sweezy, *Comparisons of Government Expenditures with National Income*. The American Economic Review, Vol. XLII, December 1952, No.5, pp.887-890.
- 12 Henry G. Brown, *The Incidence of a General Output or a General Sales Tax*. Journal of Political Economy, April 1939.



- 13 Earl R. Rolph, *A Proposed Revision of Excise-Tax Theory*. Journal of Political Economy, April 1952.
- 14 D. G. Johnson, *The Functional Distribution of Income in the United States 1850-1952*. Review of Economics and Statistics, May 1954.
- 15 L. R. Klein & R. F. Kosabud, *Some Econometrics of Growth: Great Ratios of Economics*. Quarterly Journal of Economics, May 1961.
- 16 G. S. A. Wheatcroft, *Equity in Britain's Tax Structure*. Lloyds Bank Review, July 1969.
- 17 Hugh Dalton, *Principles of Public Finance*. Routledge & Kegan Paul, 4th ed. 1954.
- 18 Richard A. Musgrave, *The Theory of Public Finance*. McGraw-Hill, New York, 1969.
- 19 R. J. Burgess, *Local Government Finance*. ESA Paper No. 2, 1970.
- 20 D. R. Myddleton, *Accounting Confusion, Economic Miscalculation*. I.E.A. Readings No. 8, Institute of Economic Affairs, London 1972.
- 21 Colin Clark, *Public Finance and Changes in the Value of Money*. The Economic Journal, December 1945.
- 22 Colin Clark, *Taxmanship* Hobart 26, Institute of Economic Affairs, London, 1964.
- 23 Colin Clark, *Industrial Location and Economic Potential*. Lloyds Bank Review, October 1966.
- 24 Colin Clark, *Population Growth and Land Use*. Macmillan, 1968.
- 25 C. Clark, F. Wilson & J. Bradley, *Industrial Location and Economic Potential in Western Europe*. Regional Studies, September 1969.
- 26 R. J. Burgess, *Enquiry Into Prices and Incomes*. ESA Paper No. 1, March 1968.

## ECONOMIC STUDY ASSOCIATION PAPERS

- |       |                                 |     |
|-------|---------------------------------|-----|
| No. 1 | Enquiry into Prices and Incomes | 25p |
| No. 2 | Local Government Finance        | 75p |
| No. 3 | Fanfare to Action               | 75p |