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PREFACE

It is impossible to study an economic phenomenon in isolation without including the numerous conditions and influences which have a bearing on it. Yet, a compromise is essential, for limitations of time and space as well as the human mind require that simplification must be combined with the complexities of economic forces in order to make some sort of analysis possible. It is for this reason that final output in terms of primary input (Table 19, National Income and Expenditure) forms the frame work of the study. In this way the assumption is made that value of final output equals the sum of the values of primary input. This is, of course, an identity which must always be true, but it is useful in showing the relationships of primary input factors in distribution. When these relationships are placed within the post-war inflationary environment of rising world commodity prices and full employment (as defined in Part 111), they can be examined in their proper perspective.

This, therefore, is not to suggest that the conclusions reached are valid for all conditions at all times. No such universality is possible in economic science. Economic problems will require solutions within the institutional and environmental framework in existence at the particular time. Accordingly, Part 1 is devoted to the distribution of income to each primary input sector. Chapter 1 assesses the monetary background of this distribution, and in Chapters 2 and 3 an attempt is made to evaluate the impact of imports cost fluctuations on the economy. Chapters 4 and 5 examine the theoretical relation between active and passive incomes in distribution and forces which can bring to a converging point a spiral resulting from the conflict of active incomes in the attempt to gain a greater share of final output. Chapters 6 and 7

turn to actual industrial policies of both labour and management as active incomes from the practical side and attempt to evaluate their relative strength. Chapter 8 then brings the two active incomes into the contact which determines the wage bargain and the price level. It is, in a sense, laying out the forces which influence the nature of the wage agreement.

The allocation of final output to its various uses forms the subject of Part 11. It is unfortunate that a division between the distribution of income and its consumption is necessary at this point, for no clear distinction can be made between the two. For this reason, the mathematical identity is introduced which attempts to link the two for analytical purposes. In this way it can be shown that income sectors and the consumption for which income is used are "mutually exclusive". Hence the futility of attempting to control the price level by operating on one member of the identity only can be easily demonstrated, for compensating actions by another member will occur at once. It is because of this that a comprehensive plan for full employment is suggested in Part 111.

Chapter 9 discusses personal consumption, which for convenience is referred to as "internal", emphasizing the growing strength of this section of demand due to incentive payments to labour and the welfare benefits received. A concept of the "consumption multiplier" thus emerges. In Chapter 10, the role of investment is evaluated with particular attention to the time lags between the moment of inception and the moment the contribution to production is made. This is again an "internal" consuming sector which will actively compete with personal consumption for a limited share of final output. The "external" shares, exports and government, values of which are determined by considerations outside the control of private consuming sectors are then discussed in Chapter 11.

Part 111 begins with Chapter 13 be restating the wage-price spiral with the aid of diagrams in the light of the values and considerations in Parts 1 and 11. The relationship of "spiral theory" to modern trade cycle theory is then shown with emphasis on the conditions which have made the conditions of chronic unemployment a pre-war memory. Finally, the nature of a comprehensive plan for full employment is discussed in general terms in Chapter 15, and the necessary adjustments required before any such plan can completely succeed. In the last analysis, it is the failure to make such adjustments combined with the fact that productive capacity is insufficient that results in the wage-price spiral.

THE WAGES - PRICES SPIRAL AND INCOME DISTRIBUTION

It is an unfortunate circumstance in modern economic life that the supply of goods and services is perpetually inadequate to satisfy the demands made upon it. Few individuals and no consuming group are completely content with the amount of goods which constitute its share of the national wealth.[1] Total income is divided among the factors of production according to social, economic and institutional criteria. It follows, then, that the function of price is to allocate the scarce supply of goods and services to those particular incomes which are able to pay the price.

Therefore, the distribution of a given real national income can be affected by the double action of first, the changing size of particular incomes and second, the price level of goods and services purchased. Inflation, which is accomplished by rising prices, alters the distribution of national income in favour of a consuming group whose income increases faster than the price level and against that group whose income is either static or increasing at a slower rate than prices.

Inflationary price rises can occur as the result of forces outside the production process, such as an excess of demand, or from within the production process, such as rising raw materials or wage costs, and (or) profits. In any case, the distribution of wealth is altered in favour of one group and against another by means of

1. For the sake of precision, a definition of the term "consuming group" would be, the sectors of the population which are in receipt of common types of income. Thus, wages and salaries, company profits, pensions, etc. would be the means of distribution of income to consuming groups.

a purchasing power loss or gain. When inflation results from a cost increase within the production process, that factor which increases in cost gains at the expense of other consuming sectors so that the real distribution of the national income is changed, at least, momentarily, in favour of the productive factor. It is possible, therefore, for inflation to be the result of a deliberately planned action on the part of any factor of production to increase its purchasing power and its real share of the national income. From this a definition of the Wages-Prices Spiral emerges: the attempt by one productive factor to increase its distributive share at the expense of another.

The term "wages-prices spiral" is unfortunate in that there is an implication that labour is responsible for price increases. It is only acceptable if the word "prices" is taken to include in its meaning the element of profit which, as the reward of a productive factor, is also increasing so that prices consequently rise; hence, in the stated definition, an "attempt by one productive factor to increase its reward at the expense of another", is frustrated in the sense that profits margins remain intact. In reality, both wages and profits, since they are most securely defended against inflation, will increase, in real terms, at the expense of other more vulnerable sectors of distribution. A more exact terminology would, of course, be "wages-profits-prices spiral".

While the ensuing discussion is largely concerned with the post-war period in Great Britain, it is not meant to imply that the struggle for increased shares of distribution is a new phenomenon. It may be quite true, and there is considerable evidence to suggest it, that the economic dislocation of World War 11, which resulted in the breakdown of traditional income differentials, merely

hastened a long-term trend which was firmly established long before. Secular inflation and the resulting redistribution of income in favour of wages and profits and against rentier income is a matter of economic history. However, this does not obviate the necessity for avoiding too rapid a development of a trend in a nation dependent on export markets. In addition, the share of wages in the national income has shown cyclical variation, rising during prosperity and falling during depression. [2] The relative scarcity of labour during prosperity has enhanced its monopoly value, even though completely full employment may not have been reached and the surplus of labour during depression, by introducing more competition among workers, has caused the share of wages to fall.

The post-war world of keen international competition, however, has resulted in the redistribution of incomes through inflation being a problem of major proportions. It is for this reason that this particular period is now being considered.

2. See Kalecki, Theory of Economic Dynamics, Allen & Unwin, Ltd., London, 1954, Chapter 2.

CHAPTER 1 MONETARY INFLUENCE

a. Financial aspects of rising price levels in post-war years.

Any inflationary process, including the wages-prices spiral, requires a means of payment in excess of the requirements of actual physical production with a given distribution of income. If, as a result of redistribution through inflation, income is transferred from one consuming sector to another with a higher propensity to consume, a greater value of transactions will result. This suggests that some idle balances will be activated by the redistribution process, and, as a result, average velocity of circulation will increase. [3] Should there be a continued demand for redistribution of income, via the inflation process, so that the average propensity to consume no longer increases as fast as the rate of redistribution, a greater supply of money or liquid assets will be required. Velocity of circulation, in other words, cannot increase as fast as the requirements of the community for money since the propensity to consume is always less than unity. The wages of labour, or the profits of management would always be greater than the consumption from these incomes; hence, during an inflationary process, the total quantity of money must be either great enough or growing sufficiently to satisfy both saving and the propensity to consume.

The relationship between money and the national income can be most neatly expressed by using Keynes' expression

$$M = M_1 + M_2 = L1(Y) + L2(r). \quad [4]$$

3. Velocity of circulation is defined, after Bresciani-Turroni as the gross national product divided by the total means of payment (total liquid assets), $\frac{Y}{M}$ V. The level of price is thus an indicator of velocity of money. "Value of transactions" is MV.

4. Keynes, General Theory of Employment, Interest, and Money, page 199.

Here, M, the total quantity of money, is divided between M_1, the amount required for transaction, and M_2, the amount required for savings (precautionary motive) and speculation. The first, M_1, is a function of the national income (total quantity of goods and services multiplied by prices), and the second, M_2, is a function of the rate of interest. Velocity of circulation depends upon the relation between M_1 and M_2, the larger M_1 in relation to M_2, the greater the velocity of circulation. By substituting in the Keynesian relation income from Employment and Other incomes for the National Income (dividing national income into two "receiving" sectors) the relationship between the wages-prices spiral and quantity of money becomes clear. Let E equal Employment Income and O equal Other Incomes. As in the Keyensian equation, L equals the liquidity function, M equals the total amount of money divided between M_1, the transactions motive and M_2, the precautionary and speculative motives. Then

$$M = M_1 + M_2 = L\ (E + O) + L(r).$$

If either E or O should increase, it must be either at the expense of M_2 or by an addition to total quantity of money, M. This would result in rising interest rates if the total quantity of money is constant. In such circumstances, investment would be curtailed and unemployment result until equilibrium is restored between the two sectors, M_1 and M_2. Such a situation would be true under the former gold standard when the money supply was limited.

If M can increase, however, or if a surplus already exists as idle balances, E or O (and the national income) will rise with the result that the money not used for consumption by incomes will spill over into M_2, driving the interest rate down. This situation, as demonstrated below, prevailed during the early post-war era.

Since the supply of money for transactions, M_1, is a function of the national income, which is determined by E and O, an increase in E, for example, will require extra money with the result that demand will rise, and, consequently, if prices increase in lesser degree than E, the real employment income will gain at the expense of other incomes. The supply of money for transactions is, therefore, a necessary fundamental for a redistribution of income through inflation. Likewise, the possibility of control of this type of inflation by raising the interest rate and increasing the size of M2 with the total quantity of money, M, constant, emerges and will be discussed later. At the moment it will be advantageous to examine the monetary background from which the wages-prices spiral springs.

b. Money surplus inherited from wartime finance.

In Great Britain, as well as in other countries whether belligerent or neutral, it was necessary to pay for the war effort by deficit spending. This had the effect of enormously increasing the quantity of money in circulation. Obviously, in view of shortages of consumer goods, had this money been freely spent, prices and the national income would have risen considerably more than they actually did. To avoid this, price control and rationing designed to check the average velocity of circulation was resorted to. This had the effect of immobilizing a large quantity of currency so that considerable potential demand waited for release as rationing and price control ended. Ideally, controls should have been maintained until supply and demand could be equated at the existing price, but in practice this was impossible to attain. Excessive post-war

demand was a world-wide phenomenon and control of inflation became very difficult in the face of rising import costs.

The position of quantity of money, velocity of circulation, and national income during wartime can be simply expressed. Let M_1 equal quantity of money at one period, M_2 the second period, V the velocity of circulation, and Y the national income. $MV = Y$ by definition. It follows that

$$M_1 = \frac{Y}{V}$$

Let Y increase by 50%, and V decrease by 50%,

$$M_2 = \frac{3/2Y}{1/2V},$$

$$M2 = \frac{3Y}{V}$$

and $\frac{M_2}{M_1} = 3.$

Hence, an increase, under the assumed conditions, of 300% in the money supply occurs. Price control and rationing decrease the average velocity of circulation $\left(\frac{Y}{M}\right)$ for all currency, and deficit finance increases the national income in money terms.

The existence of this surplus of money can be further shown by a comparison of the supply of currency in circulation and bank deposits in relation to personal income.

Ratios of currency in circulation to Income from Employment including Forces (1938 = 100)

1946	1947	1948	1949	1950	1951	1952	1953	1954
155	151	125	118.5	113	105	104	105	104

Ratios of currency in circulation to total Personal Income (1938 = 100)

1946	1947	1948	1949	1950	1951	1952	1953	1954
174	164.5	141	134.5	130	122.5	121	122.5	123

Ratios of Bank Deposits to Income from Employment (1938 = 100).

1946	1947	1948	1949	1950	1951	1952	1953	1954
121	122	115.5	111	106	97	89.5	87	84.4

Ratios of Bank Deposits to total Personal Income (1938 = 100).

1946	1947	1948	1949	1950	1951	1952	1953	1954
129	134	132	126	122	114	105	101.5	99.5

Calculated from Table 2, National Income and Expenditure, 1955, and tables 313 and 314, Annual Abstract of Statistics, No. 92.

From these figures, it should become apparent that a surplus of money which was not used for payment of personal incomes was in circulation and that this surplus was at its greatest in 1946. An actual fall in quantity occurred from 1947 - 1948, so that the index dropped appreciably. Basically, the same situation existed with bank deposits, the majority of which were current accounts rising and falling at much the same rate as currency in circulation.

Apparently, with rising prices and incomes, this surplus came into use as the need for it grew. Average velocity of circulation was increasing as idle balances fell and prices rose. World commodity prices increased immediately after the war so that with the surplus of demand as represented by excess currency and a shortage of consumer goods owing to the dislocation of war-time production, wage demands and rising prices were inevitable.

As an increased supply of goods became available through increased production, the currency surplus was further absorbed during 1948 and 1949, and devaluation and imports cost increase during the Korean War required even more currency through rising prices. In actual fact, average velocity throughout the world, as well as in Britain, was returning to a level which is determined by the average propensity to consume so that the world commodity price boom probably hastened a process which was inevitable. It is this that has shown such a remarkable constancy over long periods of time. One would expect that many years of wartime rationing and price control to have altered the consuming habits of the public, but, apparently, such has not been the case. Cyclical variations do occur, but, in the long run, velocity of circulation tends to be fairly constant with the result that a given increase of money supply eventually results in a national income which is a multiple of the quantity of money. [5]

As a supplement to the above figures of the ratios of currency to personal income, Professor Brown has calculated the ratios of all liquid assets (money, bank deposits, and national debt and other liquid assets) to national income for a number of western countries. A few of these are as follows :

5. This "normal" velocity of circulation is a characteristic of many countries. The Editor of Lloyd's Bank Review has compared pre-war velocity with 1953 for a number of countries showing this stability, see issue of April, 1955, page 19.
Again, velocity is measured by $\frac{M}{Y}$.

Table 1.

Ratio of liquid assets to national income, 1938 = 100.

Country	Year	Currency plus Current accounts	Total money including time deposits	Total Money plus public debt outside banks	Total liquid assets money plus bonds.
United Kingdom	1946	172	146	175	128
	1948	150	129	143	107
	1951	136	115	128	97
	1954	111	97.5		
U.S.A.	1946	136	116	154	106
	1948	104	94	122	87
	1951	95	85	106	76
France	1946	104	103	66	51
	1948	73	72	38	28
	1951	67	67	42	29
West Germany	1944	540	515	580	360 ?
	1948	72	45	78	52 ?
	1951	87	56	82	53 ?

Source: A.J. Brown, The Great Inflation, 1939-1951.
Tables 1 and II pp.249-250.
Figures for 1954 derived from Tables 313 and 314 Annual Abstract of Statistics and National Income and Expenditure, Table. 1.

Total liquid assets (the last column) reached the pre-war level in 1948, Currency and current accounts only, however, remained well above pre-war level, suggesting that money for transactions purposes was required to finance rising prices and wages. Apparently, employment income requires more currency than does other incomes, for the ratios of currency in circulation to Income from Employment are 4 to 5% higher than pre-war, reflecting the larger share of Wages and Salaries in total Personal Income in 1954 (70%) than in 1938 (60%). One would expect, therefore, an increased share of income for labour to be accompanied by rising currency in circulation. Further, it can be seen that labour's

currency requirements since 1951 have already reached the pre-war normal, but for Other incomes the currency is still well above pre-war at a fairly constant level. This may well be a new "normal" level of money supply to accommodate the new distribution of income in favour of labour as against other incomes.

There is probably no doubt that an important psychological relationship existed between the surplus of currency after the last war and the wages-prices spiral. The period of wartime rationing and price control resulted in excessive demand which made price increases and corresponding wage increases possible. Doubtless, this created an environment of optimism on the part of both labour and management, for the excessive demand insured that any wage claim could be met. This, combined with the breakdown of traditional differentials resulting from labour shortages and bottlenecks of the war would be sufficient to bring about a "habit" of wage demands spurred on by rising living costs resulting from increased costs of imports. Once the excessive demand had been absorbed and the average velocity of circulation restored by a higher level of national income, there would be no reason to expect that wages and profits should not continue to rise. Inflation, from whatever cause, redistributes real income in favour of those groups most capable of defending their incomes; therefore, it is only one step further to a deliberate policy of increasing real income. What may be at one time a fortunate circumstance can, at another, become a planned attempt. This, probably, would be the major contribution of the surplus of currency ~~with~~ which represented consuming potential. In this respect, a currency excess is a prime factor in any inflationary process.

It is doubtful, however, that money has as direct an effect on the level of wages as in the past. Since money supply has been

forced to play a minor role in the economic life of the nation, ample supplies of currency and credit are assured under any circumstances. The surplus of currency finds its way through market channels, first to entrepreneurs, then eventually to wage and salary earners, to company reserves, and to capital owners as dividends. Obviously, it is impossible to pay higher wages if the money is not available. Restricting the supply would drive up interest rates, cutting investment projects and, eventually, consumer demand. Under such circumstances, it would be impossible for wages and profits to rise. On the other hand, if the supply is virtually unlimited, with a given velocity of circulation determined by the propensity to consume, rising prices and wages are made possible.

During the immediate post-war period, excessive currency inherited from war-time deficit finance furnished the necessary means of financing inflation. Once this excess was absorbed by rising national income and prices continued to rise, further means of payment had to be forthcoming. Inflation becomes self-generating when the money supply in the hands of consumers is great enough to finance price and wage increases. Since the wage earners themselves are consumers, the circular movement is completed, only to begin again. The entire processm however, requires an ever-increasing supply of currency which must be supplied by the Central Authority. Inthis sense,the wages-prices spiral is, of course, no different from any other type of inflation, except for the fact that money is of minor importance as a cause.

Primarily, the object of a factor of production during a wages-prices spiral is to gain a greater share of <u>real</u> income, and this is accomplished through the media of rising prices and

increasing money supply. This contrasts with the great inflations which occurred after the first World War which were characterized by rapidly increasing velocity of circulation and an evergrowing supply of money. Here, of course, the money itself was the primary cause.

CHAPTER 2. COMMODITY PRICE INCREASES

a. A suggested distribution equation

Another influence should be examined which has a more direct bearing on the wages-price spiral as defined above. At this stage, the approach will be from the supply side as opposed to monetary demand. Here, the effect is felt from within the production process, though the cause is purely external.

The post-war period has been characterized by rising commodity prices which have responded to various influences prevailing at the time. From 1946 to 1948, the cost of British imports rose by about 25%, and from 1949 to 1951 by 52%, on the basis of annual averages. The first period was the result of war-time shortages and dislocation of production, and the second, the result of devaluation and the Korean price boom. [1] Both, however, affected domestic prices in Great Britain considerably, as well as in other countries.

For the purpose of evaluating the impact of an imports cost increase, an equation of distribution will be introduced which will have great importance later. This can be derived in the following way. Suppose the price of consumers' goods, P, is distributed according to imports, I, wage costs, E, and profits, etc., C. (Indirect taxes are temporarily ignored). For solution purposes, one of these must be considered an independent variable; therefore, though mathematically it makes no difference which is independent, in this case imports will be so considered for the sake of economic sense.

1. Cmd. 9725, page 4.

Thus, $I + eP + oP = P$ (e and o representing ratios).

Rearranging terms gives

$$P = \frac{I}{1 - (e + o)} .$$

In order to demonstrate the effect of cost changes on these ratios of distribution, suppose that these costs are distributed according to imports = 40, labour = 40, profits = 20. Price will now be 100. If imports increase in cost by 5%, the change will be as follows :

period 0 - 40 + 40 + 20 = 100

period 1 - 42 + 40 + 20 = 102

Now this represents a loss of real wages and profits, obviously, so that in the next period, prices will rise still further as a result of attempts to regain a 2% loss in purchasing power; hence,

period 2 - 42 + 40.8 + 20.4 = 103.2

In subsequent periods, profits and wage adjustments will take place until purchasing power is restored to equilibrium level at

period n - 42 + 42 + 21 = 105

Thus the original equilibrium is restored to 40% and 20% for wages and profits as ratios of distribution, which is the solution of the above equation, with prices 5% higher than before. To add a third distributive share, indirect taxes, does not alter the basic situation.

As a static solution, the final adjustment represents the ultimate equilibrium point towards which prices, wages, and profits would move. But, like all static solutions, it does not include the many dynamic elements which will modify the situation and tend to stabilize prices. However, it does indicate the inflationary potential of rising import costs. For an example, it is possible to calculate the effects of rising imports costs, wages, and profits

during the period 1946 - 1948, using the "distributive share" method. At this time, imports costs rose by 25% along with a wage rise of 18.4% and a profits increase of 14%. In solving this equation, it is necessary to look ahead to pp. 60 - 61 where the effect of production on the distribution equation is determined. Also, indirect taxation must be included so that the former equation, $P = \frac{I}{1 - (e + o)}$, will read

$$N \text{ (value of final output)} = \frac{I}{1 - (e + o + t)} .$$

Passive incomes can be ignored since they cancel out (see p. 60) and affect the solution only through their influence on the shares of active incomes. Using the input-output table, the shares of wages, profits, indirect taxes, and imports which enter into production can be determined.

Let E = Employment income
O = Gross profits
T = Indirect taxes
I = Imports.

Then, from Table 19 of National Income and Expenditure,

E = 48
O = 13.45
T = 10
I = 18

Passive incomes are ignored and are removed from the "Gross Profits, Other Incomes and Rent" sector by the proportions which these incomes bear to ~~grown~~ gross profits in the gross national product. Hence, the new active income ratios will be

$$e = \frac{E + dE}{100 + dE + dO + dT + dI}$$

$$o = \frac{O + dO}{100 + dE + dO + dT + dI}$$

These, for the period 1946 - 1948 are

e = 48.3
o = 13.06
t = 10.6 (the increase in indirect taxes is taken from Table 49, National Income and Expenditure, 1955).

Imports (I) increased by 25% so that I2 = 22.5. These can be compared eith the old ratios stated above as absolute quantities.

Quantity of production can be introduced with the equation derived on pp. 60 - 61 The gross national product at constant prices increased by about 5% from 1946 - 1948, so that $Q_1 = 100$, $Q_2 = 105$, P_1 (the old price level) = 100, $I_1 = 18$, $I_2 = 22.5$, and x = 1 minus the old ratios, and z = 1 minus the new ratios.

$$\frac{Q_2}{Q_1} = \frac{P_1 x\ I_1}{P_2 z\ I_2}$$

$$\frac{105}{100} = \frac{100\ (.2855) - 18}{P_2(.2804) - 22.5}$$

Solving for P_2 gives the answer 116 approximately, or a 16% rise in the price level from 1946 - 1948. The actual price level rose by 15.5%.

b. <u>The impact of imports on the equation</u>

Two natural features must be noted about the nature of I. First, the larger in quantity,(that is, the greater the share in final price) the greater will be the initial impact on the cost of living. In Great Britain, imports represent 21% of the cost of consumers' goods; hence a 25% increase will result in a 5% rise in the cost of all goods consumed. If this is actively reflected in the index of retail prices, for example, it could easily be sufficient to initiate a spiral of rising wages, profits, prices, etc., if no factor of production is willing to accept a cut in its real rewards. In the absence of any stabilizing influence,

this could continue until equilibrium is reached with a 25% price rise. In the United States, on the other hand, the importation of goods is of such small proportions that the initial impact is negligible, and, consequently, easily absorbed before any results are noticed. Thus, the larger is I, the greater is the propelling force which will initiate successive movements of wages, profits, and prices to the new equilibrium price level.

Second, the initial inflationary impact of I will depend upon the stage of production which it enters. If basic raw materials form the bulk of imports, as in Great Britain, the effect of a price rise, on a percentage basis, will be damped by succeeding stages of production. There are, generally, at least three stages of production which any such commodity must pass through before it reaches the consumer; hence the percentage increase in retail prices may be quite small compared with the initial raw material increases. Doubtless, this is an important factor in absorbing many commodity price rises, for some, like copper and rubber, have increased by 250% since 1949.

A further, rather obvious, point should be made in view of its importance in the ensuing discussion. Ultimately, import costs do not represent potential consumer demand within the nation. This is the all-important distinction between rising prices resulting from import cost increases and rising prices resulting from rising wage costs., It is quite conceivable that in the interest of justice, the first impact of cost increase could be compensated for by some rising wages and profits so as to protect in some measure real earnings. Once a general round of increases is accomplished,however, demand rises and a self-generating spiral may emerge. To avoid this, the initial impact of rising import costs must only be compensated for by a rise in incomes already depressed.

c. Effects of rising import costs on European nations.

It is now necessary to examine the "first impact" of import cost rises in greater detail since it is quite possible that given appropriate conditions, they can result in a spiral of wages and prices which will approach equilibrium at a much higher level than the import cost rise itself would cause. The two main characteristics, size of imports in relation to gross national product and quality of imports, will be considered first.

Table II

Nation	1. Imports[3] as Percentage of Gross Domestic Product (1953)	2. Percent. increase in import costs (1948-1952)	3. Percent. increase in cost of living (1948-1952)	4 ✕ Column 2 / Column 3
United Kingdom	20	53	20	2.65
France	14	85	50	1.7
Finland	17½	82	50	1.64
Austria	19	150	100	1.5
West Germany	16	30	2	15
Norway	40	31	31	1
Sweden	20	50	24	2.08
Denmark	28	34	25	1.36
Netherlands	43½	31	28	1.11
U.S.A.	5	2	10	.2

Source: Column 1, Statistics of National Income and Expenditure, New York, 1955.
Columns 2 and 3, Chart 7, page 65, Economic Survey of Europe since the War, Geneva, 1953.

✕ As an indicator of the reaction of living costs to movements of import costs, perfect reaction would be shown by unity. The larger the number the less the tendency for the cost of living to rise in response to rising costs of imports.

3. The figures of imports and gross domestic product for the United Kingdom have since been revised as, doubtless, have others, so that column 1 is of only relative value.

Norway and the Netherlands, highly dependent on imports, have the most complete reaction to rising import costs with Denmark not far behind. The remainder of the countries, however, show no correlation between the figures in Column 1 and Column 4.

For the second characteristic, quality of imports, the imports of the above nations have been divided into three groups - 1. Food, Drink, and Tobacco, 2. Raw Materials, and 3, Manufactured Products. [4]

Table III

Nation	Year of Classification	Division of total imports by percentage			Percentage of each group of the Gross Domestic Product		
		1.	2	3	1a	2a	3a.
United Kingdom	1949	42.6	38.25	19.06	8.52	7.67	3.812
France	1949	27	51.63	21.08	3.88	7.23	2.94
Finland	1954	18.8	23.66	57.50	3.29	4.15	10.06
Austria	1949	34.3	35.50	30.15	6.5	6.75	5.72
Western Germany	1952	32.26	46.50	21.0	5.15	7.45	3.36
Norway	1952	14.23	21.12	64.75	5.7	8.45	25.6
Sweden	1952	14.9	31.28	53.70	2.9	6.25	10.7
Denmark	1949	16.4	31.80	51.56	4.6	8.9	14.45
Netherlands	1952	16.55	37.21	45.95	7.2	16.4	21.5
U.S.A.	1949	32.5	36.65	31.06	1.61	1.83	1.55

Source: Yearbook of International Trade Statistics, 1952, 1954 United Nations, New York, 1953, 1955.

A multiplication of these percentages by Column 1 above yields a measure of the influence on the domestic price level that these three categories will exert. Again, the nations with the largest imports of manufactured goods, in relation to the Gross Domestic Product, Norway, the Netherlands, and Denmark, show the closest correlation between import costs and cost of living, (Column 4 in Table 11).

4. This grouping combines the S. I. T. C. code numbers 0 and 1 into group 1, 2 - 4 into group 2, and 5 - 9, into group 3.

In the same way, exports can be divided into the three categories so as to complete the analysis from the side of demand.

Table IV.

Nation	Year of Classification	Division of total exports by percentage			Percentage of each group of the Gross Domestic Product		
		1	2	3	1a	2a	3a
United Kingdom	1949	5.35	6.7	88	1.07	1.34	17.6
France	1949	13.4	14.6	72	1.88	2.4	10.1
Finland	1954	2.86	51.2	46	.5	8.95	8.05
Austria	1949	1.07	25	74	.19	4.75	14.06
Western Germany	1952	2	14.6	83.5	.32	2.34	13.4
Norway	1952	20.6	31.5	48	8.25	12.6	19.2
Sweden	1952	4	44.2	52	.8	8.8	10.4
Denmark	1949	75	5.1	20	21	1.43	5.6
Netherlands	1952	34.4	18.5	47.3	15	8.05	20.6
U. S. A.	1949	20.3	19.8	60	1.15	1	3

Source : Yearbook of International Trade Statistics, 1952, 1954, United Nations, New York, 1953, 1955.

In calculating the percentage of the Gross Domestic Product for the three categories, the ratio of imports (Column 1, Table I) was used. This is necessarily approximate since there is some fluctuation in exports from year to year.

Now, the position of these countries in the face of imports cost increases can be more accurately assessed. It has been stated that the initial effect of an imports cost increase will depend primarily on the amount of imports in relation to the gross national product, and the nature of the imports. Raw materials price rises will have less effect on consumer prices than finished goods because they enter into production at lower stages; hence, as each production process is completed, the initial impact reduces by the ratio of the cost of basic material entering into production and the final cost,

Fundamentally, the nations fall into two groups if classified by both quantity and quality of imports. The "primary producers", Norway, Sweden, Denmark, Finland and the Netherlands are characterized

by either high imports of manufactures, high total imports equally divided, or, as in the case of Norway, high quantity of imports heavily biased toward finished manufactures. These rely principally on exports on raw materials or food and would be expected to react most sharply to world import prices. All, with exception of Sweden (a "border" case whose exports of manufactures are almost the same as imports), show a very high reaction to import cost increases.

The reaction, however, is assymetric for falling import costs have not produced a drop in the cost of living. It appears that there is a strong tendency for the economies of these primary producers to adjust to these new cost levels, and once wages and profits have expanded accordingly, the new "norm" exists about which prices will fluctuate depending upon the state of the market. High inelasticity of supply of raw materials is responsible for the violent upsurges of prices of the exports of these countries in response to a world demand stimulated by the Korean War. Consequently, a favourable movement in the terms of trade can be seen for Norway, Finland and Sweden during most of the Korean Boom. In view of the importance of category 2 exports (raw materials) to the domestic economy of these countries, one would expect a rising national income with an artificially swollen demand. When this is combined with rising import costs, mostly of manufactured goods, the price level must react sharply. A new level of wages and prices, then, is reached which proves to be the long term level with minor fluctuations. This is, in essence, the secondary reaction to the initial impact of imports (and exports) price rises.

An examination of the tables will show that it is highly improbable that a self-generating movement of rising prices and wages could be initiated. Since so much of the manufactured goods is from external

sources, their price level will not be directly affected by domestic wages costs. The domestic wage level can only affect those goods which are exported and consumed at home, and, in view of the quantitative importance of the export trade, severe unemployment could result from lost markets. Probably, therefore, one can conclude that the domestic price level in primary producing countries will react in close sympathy with the rising cost of their imports but will not show any tendency to drop so long as domestic demand remains at a high level with favourable terms of trade. This implies that the economies of primary producers tend to become closely linked with those of the nations which represent their markets.

For the industrial nations, Great Britain, France, Western Germany and Austria, the position is quite different. Wage payments represent both a cost and a source of demand so that after the first adjustment of the economy to rising import costs, further adjustments can take place with rising prices in response to rising wage costs. Primary producing nations are in a position of exporting basic commodities with inelastic supply. The supply of products of industrial nations, on the other hand, is elastic, at least under post-war conditions. These nations are facing a buyers' market in the international sense since competition among them is great. Rising wage costs in primary producing countries will affect the price only from the side of demand subject to a high elasticity of supply of imports of manufactured goods; hence consumers in these countries will enjoy a rising standard of living with favourable terms of trade. In industrial countries, however, domestic demand for a domestic supply will increase so that if the supply of goods is less elastic than the demand, prices can rise in a perpetual spiral until each producing factor is satisfied with its

share of the national product. The process, of course, is subject to the checks of international competition for markets. In general, therefore, the difference between primary and industrial producers, in terms of a supply inflation, is that the primary producers will react once to imports cost increases, adjusting incomes and prices to a new level which tends to stability downwards, while industrial nations can react many times to an imports cost increase through self-generating demand. This can result in continuous rising prices and incomes which will leave the primary producers, with inelasticity of supply of their products, in a favourable position vis-avis the industrial nation with elastic supply of products. As long as more competition exists among industrial nations than among "primary" nations, the terms of trade will be favourable to the primary producers.

An examination of the terms of trade for industrial and primary producers shows that during the Korean price boom the primary countries enjoyed a very favourable position. The terms of trade for Finland, for example, during the fourth quarter of 1951 reached the low figure of 71 (1948 = 100). From then, however, rising domestic costs in response to international prices for wood-pulp, forced the index by the end of 1952 to 115. Norway and Sweden show the same variation but without the extremes of Finland. There may well be, therefore, a "floor" which determines the minimum level of domestic wages and prices and which is in turn determined by the domestic institutional structure of the economic system. High profits from advantageous terms of trade react sooner or later on the level of costs within the country as wage demands, etc. become more difficult to keep in check; hence the cost of living will tend to reflect the trends of the movement of the terms of trade.

For industrial countries, however, with high raw material imports, favourable movements in terms of trade should with constant domestic costs have an effect through the cost structure of lowering the domestic price level. In the United Kingdom, for example, the terms of trade improved by almost 14% from 1952 to 1954; however, this was accompanied by a rising cost of living. Western Germany is an example of the opposite trend, a favourable movement in the terms of trade being accompanied by a falling cost of living. France has shown too small a movement in both cost of living and the terms of trade to be of significance, but the cost of living in Austria fell from 1952 to 1954 at the same time as the terms of trade moved unfavourably. Thus, there is no clear relationship in these industrial nations between cost of living and terms of trade as there is with the primary producers. Each country must be examined individually to determine the reasons for the varied reaction to imports cost movements.

From Table 11, Column 4, of the four industrial countries (those whose exports of manufactured goods exceeded imports) Germany was most successful in absorbing imports cost increases. Great Britain was next, Sweden with a high percentage of raw material exports, third, France, fourth, and Austria, fifth. Austria, Britain and Sweden appear to be similar in that the quantity of imports (Table 11. Column 1) are the same, with the other two countries well below. From the qualitative standpoint, Great Britain, France and Germany import roughly the same amount of raw material in relation to the national income, although Britain is more dependent on food imports. This appears to be the major difference in import structure between Great Britain and the continental industrial nations and may well be of

considerable significance in influencing wage demands, for the cost of imports of food, drink, and tobacco had increased by one third from 1948 to 1952 and have since remained fairly constant. If domestic food production costs increased correspondingly, this would increase the index of retail prices by about 12% since approximately 40% of consumer budgets are required for food, assuming that no increases in other domestic prices occurred during that interval.

Of the remaining industrial countries, Germany seems to have been in a unique position, for an almost complete insulation existed between imports costs and the price level. This suggests that the absorption of these cost increases within the price structure must have been more than a natural quantitative cost relationship, that is, some productive factors must have suffered a loss of their distributive shares. Furthermore, this loss must have been "permanent" since no apparent attempt was made to regain the original position through further price rises.

Broadly, the policy followed by the government of Germany has been to encourage investment from retained industrial earnings whilst, at the same time, discouraging wage and salary increases. Every incentive was offered to producers in the form of income tax relief on re-invested profits and export earnings. At the same time, indirect taxes were increased so that the entire structure of taxation became more regressive than before. Consuming was, therefore, discouraged while investment and exports were encouraged. This had the effect of altering the relative shares of the national product in favour of profits, and since there was a considerable influx of labour from the East, Trade Unions were not strong enough to protest.

Generally, this policy has succeeded in increasing industrial production to a level higher than pre-war. It appears that the

mainspring of the entire recovery of Germany has been the profit motive with rewards of greater profits as an incentive; furthermore, these profits have been real in the sense that they represent a greater share of the national product. The result is that even though wages and salaries may have been receiving a smaller distributive share, real wages and salaries rose as the gross national product at constant prices increased.

Weekly Real Wages in Industry in Western Germany[5]
(September 1949 = 100)

1950				1951		
First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter
102	107	113	117	116	115	117

In the last analysis, the economic policy of the German government forced a compulsory saving programme on the people, which, though it did result in considerable inequality of income, made the drive for investment and exports possible. Doubtless, the success of this policy was due to a large extent to the surplus of labour and the monetary measures which helped to maintain the stability of the currency. The encouragement of investment from retained earnings and the realization of the fruits of these investments in the form of real profits combined with sufficient restriction of credit appear to have been the major factors in making the high ratio of imports cost to the cost of living possible. For the purpose at hand, the fact that German labour accepted its position of reduced share, even when profits were increasing is the significant feature. This was undoubtedly the direct result of a labour surplus which assured a weak bargaining position for the trade unions, and also assured that no further repercussions could arise.

5. Taken from Economic Survey of Europe in 1951, Geneva, 1952, page 112.

From the experience of Germany, therefore, emerges a check to a wage-price inflation, viz. a degree of unemployment which weakens the monopoly position of organized labour.

In contrast to Germany, France shows a highly unstable economy subject to inflationary pressures quite outside the mechanism of the prices-wages spiral. Like Germany, there were no direct controls used as anti-inflationary measures, but a heavy programme of state expenditure on long term investment combined with full employment has made the French economy highly susceptible to cost increases. Also the well-known defects of the French taxation system which make tax shifting among certain classes relatively easier than for wage earners, contributes to rising prices, for the burden of taxation can be passed on from the industrialist and the trader to the consumer as higher prices. These are factors which contribute to an inflationary spiral and enhance its effect once the process has been set in motion.

On the other hand, within the production process, an important feature of French economic life is the lack of mobility of resources. Traditionally, France has been a nation with a high agricultural population as well as a large merchant class so that the problem of shifting labour to its most advantageous use is particularly difficult. As a result, an increase in demand for a product, instead of attracting labour, simply causes higher wages and becomes the signal for further price and wage increases. Thus, on an institutional basis, import cost increases become difficult to absorb. In reality, the French situation is one in which an imports price rise becomes a spark igniting a highly volatile inflationary fuel. The pressures of inflation are already in existence outside the process of production.

In this situation, the natural absorbing tendencies of the price mechanism which reduce the percentage rise of raw materials costs at each succeeding stage of production tend to be nullified. In fact, it has been pointed out that only under inflationary conditions will increased industrial activity take place. This is tantamount to suggesting that inflation is necessary to force sufficient saving upon the people to accomodate investment. [6] It is, consequently, impossible for increased production, and lower costs per unit, to assist in counteracting raw material price rises. For these reasons, therefore, the ratio expressed in Table 11, Column 4, tends to be almost as low as that of primary producers.

In Sweden, as in the United Kingdom, greater price stability was secured than in France. However, the distribution of imports among the three categories shows that imports of raw materials and manufactured products tends to be high. Comparing Columns 3a in Tables 111 and 1V, it is evident that exports and imports of manufactured goods are about equal. Exports of raw material, however, seem to be greater than imports. Considering total quantity of imports, Sweden and the United Kingdom are the same. Now, in line with the above analysis, one would expect high incomes in the primary exporting industries during a raw material price boom, and, since the exports of these commodities were greater than the imports, the terms of trade, in the long run, should be favourable to Sweden. Consequently, there would be inflationary pressure from both the cost side and the demand side.

In the Northwestern European countries, including the United Kingdom and Sweden, immediate post-war anti-inflationary measures

6. This statement, and the material for this brief general survey of economic institutions within each country is found in Economic Survey of Europe Since the War, United Nations, Geneva, 1953, pp.73 - 83.

included physical controls and fiscal policy combined with low rates of interest so that a high level of investment and full employment were maintained. With the onset of the Korean price boom the distribution of income became a major problem, for already the ability of the economies to absorb further cost increases by physical controls had been strained. Political expediency had set the upper limit of these measures. Under the circumstances, therefore, the only way of avoiding rising prices would be to permit real income shares of some productive factors to fall. Thus, the price rise resulting from an imports cost increase would not be followed by successive wage demands which restore the original shares by further price rises. This, however, could not be done under full employment conditions since profits were increasing under the pressure of demand.

Western Germany, on the other hand, could, by permitting a redistribution in favour of profits, encourage production at lower prices, and insure that no further wage demands would be forthcoming. This appears to be the major difference between Germany and the industrial nations of Northwestern Europe.

CHAPTER 3.

FORCES TENDING TO LIMIT THE EFFECTS OF COMMODITY PRICE INCREASES .

a. Production.

From this broad survey of Western European countries, some basic conclusions as to the nature and significance of "I" (imports) in the equation of distribution can be derived. As already suggested, the size and quality of imports are of primary importance in influencing the cost of living. From the institutional side the effects of an increase in I can be cushioned by a number of factors acting within the economic structure of the nation. The first, and probably the most important, is production.

If production should increase sufficiently to allow a rising absolute level of profits, the loss of profit margins resulting from higher raw material costs could be compensated. Measured as a percentage of turnover, profits would fall, but, with sufficient volume of production under diminishing costs per unit, the absolute level of profits could remain constant or even rise. The situation can be visualized as a stream of raw material continuously flowing through the process of production. If the stream becomes larger (costs of raw material rise) and the rate of flow is constant, prices must rise by the same amount if the shares of labour and profits are to remain constant. However, the speed of flow of the stream can increase and the size may remain constant without affecting prices or wages and profits. Furthermore, the speed of flow (or rate of turnover) must increase without increasing the costs of labour to such an extent that the economies of greater production are cancelled.

This follows from the fact that cost per unit varies directly as the absolute costs of productive factors and inversely as the quantity of production.

Let I the cost of imports, E employment income, and O = profits, etc., Q = quantity of production, and P = the price level. If indirect taxation is ignored (for convenience)

$$PQ_1 = I_1Q + E + O .$$

E and O are absolute values which are assumed constant, and I is value per unit.

Obviously,

$$Q_1 = \frac{I_1Q + E + O}{P}$$

Now, let the cost of imports increase to I_2 so that

$$Q_2 = \frac{I_2Q_2 + E + O}{P}$$

In order to determine the quantity of production necessary to maintain constant prices, the two equations can be combined so that

$$PQ_1 - I_1Q_1 = PQ_2 - I_2Q_2, \text{ and}$$

$$Q_2 = \frac{Q_1 (P - I_1)}{(P - I_2)} .$$

Now, assume that a higher labour cost (E_2) is required in order to gain the production Q_2. For convenience, let $E_1 + O = X_1$, and $E_2 + O = X_2$, then

$X_1 = PQ_1 - I_1Q_1$, and $X_2 = PQ_2 - I2Q2$. The rate of $\frac{Q_2}{Q_1}$ is

$$\frac{Q_2}{Q_1} = \frac{X_2 (P - I_1)}{X_1 (P - I_2)}$$

The possibility of absorbing a new imports cost, I_2, by increased production at lower costs per unit can now be examined more closely. Suppose that, in order to secure an output Q_2, an increase in X is required which is proportional to the increase in Q, $\frac{dQ}{Q} = \frac{dX}{X}$.

Clearly, the equation cannot be true if $\frac{Q_2}{Q_1} = \frac{X_2}{X_1}$, because

the quantity $(P - I_1)$ is greater than $(P - I_2)$. The only condition that would satisfy the equation is that $\frac{dQ}{Q}$ is greater than $\frac{dX}{X}$. In this way, $\frac{Q_2}{Q_1}$ would be greater than $\frac{X_2}{X_1}$ and, if sufficiently great, the imports cost increase could be absorbed by production. This would mean, in the aggregate, increasing returns. If such were the case, the absolute level of profits would increase even though the rate as a percentage of turnover might fall or remain constant.

Broadly, this was, apparently, the situation existing in Germany during the Korean price boom. The pool of unemployed made it possible to increase output with a less than proportionate increase in labour cost so that prices could be kept almost constant. A successful drive for export markets assured the necessary demand for higher output so that conditions of increasing returns existed within the nation as a whole. Incentives to invest were also high since profits were permitted to remain intact so that output per man-hour could rise. The resulting stability of prices made rising real wages possible as nominal wages rose, although the share of wages of the national product was less.

Among other nations where full employment existed, increased output could only occur by a rise in employment income (or X in the above equation) which was a greater percentage than the output increase, $\frac{dX}{X}$ was greater than $\frac{dQ}{Q}$. Overtime, bonus incentives, etc. tend to make wage costs more expensive, and the declining mobility of labour makes it more difficult to use labour to its greatest advantage. This, of course, is illustrated in the extreme by France.

Since, in order to increase production, employment income must increase at a faster rate than the rate of output, a surplus of domestic purchasing power is assured. Hence, it becomes relatively easy to dispose of the marginal output on the home market. In fact, domestic demand will become so great that balance of payments difficulties will result as imports exceed exports. The only possibility of avoiding such a circumstance would be either to encourage voluntary saving or resort to compulsory saving by reducing the disposable income through a steeply graduated income tax at a faster rate than the increase in income. With such compulsory saving, however, the worker may lose the incentive to produce since he will not be able to enjoy the benefits of his increased income.

There is no doubt that production did play an important role in absorbing part of the raw material rises in Western Europe. In the industrial countries, the spread between the wholesale prices of raw materials and of finished products is greater, the higher the index of industrial production. For Germany, of course, almost constant prices were maintained.

It has been shown above that as costs of imports rise, it is production and the wage cost which accompanies it that determines the stability of the price level. The rate of production increases must be greater than the rate of wage cost increases in order for production increases to absorb any rising imports costs of raw material. The relationship between the two can be expressed as a ratio.

Table V.

Nation	1. Increase in Production $\frac{dQ}{Q}$ (1948-1952)	2. Increase in aggregate wage costs $\frac{dE}{E}$ (1948-1952)	Ratio of Column 1 to column 2. $\frac{dQ}{Q} \cdot \frac{E}{dE}$
United Kingdom	17%	18%	.945
France	25%	58%	.43
Finland	31%	70%	.443
Austria	79%	77%	1.025
Western Germany	116%	38%	3.5
Norway	33%	24%	1.375
Sweden	13%	25%	.52
Denmark	21%	21%	1
Netherlands	28%	19%	1.475

Source: Monthly Bulletin of Statistics, United Nations Statistical Office, Feb., 1955.

Now the variations in the reactions of cost of living to imports cost rises among industrial countries (Table II, Column 4) can be more easily explained. Germany again shows the greatest rise in production in proportion to the rise in earnings; the United Kingdom, Sweden, Finland and France follow in descending order. These latter, however, could not gain price stability from increased production since they are producing under aggregate decreasing returns, that is, $\frac{dQ}{Q}$ is less than $\frac{dE}{E}$. The only possible way for costs to be absorbed would be to reduce the absolute level of profits or to seek economies elsewhere in the production process. Furthermore, the conditions were being set for further cost increases to be included in higher prices for earnings were growing in France and Sweden at a faster rate than production. To avoid this, the propensity to consume would have to be reduced.

To attempt further precision of analysis is hardly feasible since many technical considerations enter in which cannot be determined. It is possible, for example, to economize in the use of a commodity

as new techniques are developed. Thinner metals, cheaper substitutes, etc. can bring about the utmost economy in the use of more expensive commodities so as to reduce the overall cost of imports. These are techniques which are available to the industrial producer and, though in a lesser degree, to the primary producers. These nations will benefit only indirectly as cheaper manufactured goods become available to them as imports, although, again, these manufactured products may be utilized with maximum efficiency. In this case, in terms of the above equation, quantity of imports, Q_1, will not increase at the same rate as production increases, so the same relationship between quantity of imports and volume of output will not hold.

b. Industrial Finance.

A second institutional factor which acts to check the impact of an imports cost increase is the general financial state of industry. It is quite impossible to undertake a detailed analysis of industrial concerns and the structure of their finances, but one can say, broadly, that the greater the reserves, the more able is industry to accept increases in imports costs without increasing prices. Temporary fluctuations in world commodity prices will be regarded as part of the element of risk in production; hence it is essential that temporary increases be met from reserves to be recouped when the commodity price falls. Should, however, rising world commodity prices become permanent, or the entrepreneur class expect them to be so, prices must rise sufficiently to meet the increased cost. Such, probably, was the situation during the period under review, 1948 - 1952. The devaluations of 1949 would add a permanent increase to import costs, and the outbreak of the Korean War and the

accompanying stockpiling of scarce commodities would add further to the "permanent" increase.

Now, in so far as industries made purchase of commodities well in advance of their needs, hoping to avoid price increases, they would contribute, first, to stability of the price level, and, second, to the original demand which made the commodity cost increase in the first place. Which will be the greater effect in the long run depends entirely upon the circumstances influencing expectations one way or another. In its initial stages, the Korean conflict must have engendered fear of becoming world-wide, but as it became increasingly clear that it would be localised, demand for stock-piling must have relaxed with a consequent effect on prices. The industry which made purchases of a year's stocks in mid-1950 would have been in a much more favourable position than another which purchased at the peak price period of April, 1951. Hence it is a combination of shrewdness, foresight, and luck which will determine the impact of a commodity cost increase on a particular price. However, the stronger the financial position, the better able will be an industry to take advantage of the circumstances at the moment.

Ultimately, much of these individual gains will be cancelled against individual losses so that the net effect on prices, in the aggregate, will probably be small. However, if industrial profits and reserves are, in general, high, cost increases can be cushioned to some extent.

C. Psychology of inflation

The third institutional factor is, of course, far too complex to be considered in anything but the broadest generalisations. The speed and violence of the reaction of prices depend to a great extent upon the inflation psychology of the people. If, as in France, a falling value of money is an essential to increased production, windfall profit gains assume major importance. This will heighten the speculative tendency, and, instead of stockpiling as a hedge against future losses with constant prices, purchases of stocks become a source of profit at increased prices. Thus, instead of gains and losses cancelling themselves in the aggregate, speculative gains will outweigh the losses. In this fashion, the effect of rising cost of basic commodity imports can be increased beyond the natural effects which result from the amount of the commodity entering into production multiplied by the percentage rise in cost.

Likewise, the consuming public whose confidence in the stability of purchasing power of currency tends to be weak will increase their demand for products which embody the basic commodity in manufacture. The overall result is to enhance the natural increase in prices instead of reducing it.

d. Physical Controls.

Fourth, and again this must be treated only in generalizations, the administrative controls of the government, both rationing and price controls, are important as a determinant. Political considerations are important here, and the fact that these had been resorted to throughout the war and immediate post-war years in the countries of Northwest Europe rendered further attempts in this

direction unpopular. It was perhaps, unfortunate that strict monetary policy was not considered advisable during the devaluation and subsequent Korean period, but in the last resort in democratic countries, administrative anti-inflationary measures depend upon the willingness of the general public to accept them. The evidence suggests that the patience of the people was too near exhaustion to have produced any results in this direction.

In view of these fundamental factors operating from within a particular nation, the varying reactions of the industrial nations to rises in imports costs as set forth in Table II, Column 4, can be interpreted. Germany's remarkable ability to absorb cost increases almost completely was due largely to increased output per unit of wage cost. The United Kingdom, however, shows little more than a natural absorbing effect occupied with the second factor of high industrial reserves. France and Sweden could only gain from production increases by more efficient application of labour since wages increased much more than output, and the inflation psychology in Austria and France would operate against any cushioning effects. The domestic level of prices of primary producers such as the Netherlands and Denmark, highly dependent on imports, must react sharply because of the sheer weight of quantity

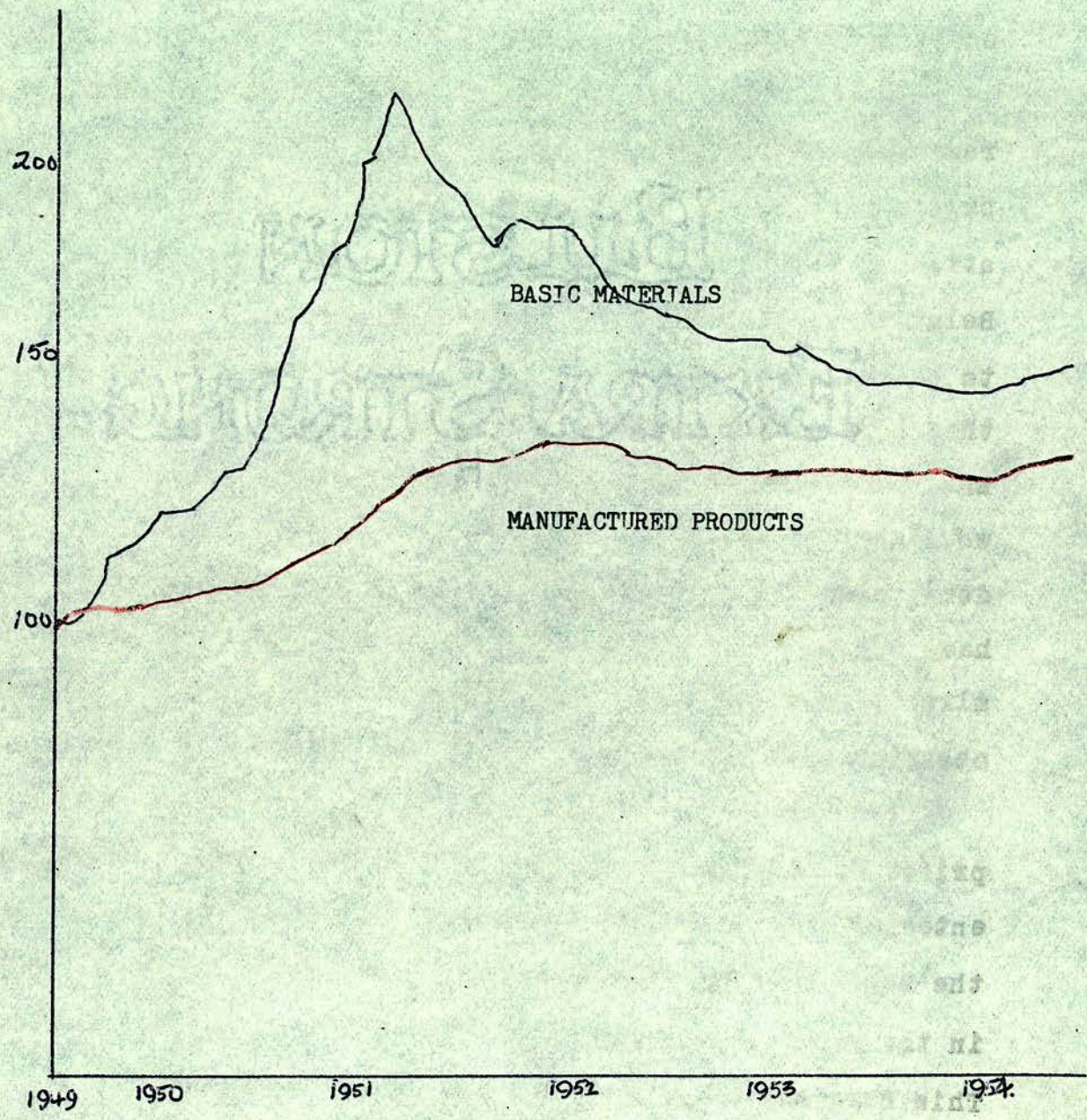
SUMMARY

This analysis of "first impact" results of import cost increases is based largely on the natural effects which result from the quantity and quality of imports which enter into production within a country. These are contrasted with some institutional factors

which may heighten or depress the first impact depending on the relative strength. On the whole, it appears that the natural results are the main determinants of the initial impact, especially when quantity is so large that the economy is dependent upon the price level of manufactured imports. This is exemplified by Norway and the Netherlands whose imports of manufactured products represent about 20 to 25% of the national product.

The industrial nations which import largely basic commodities for manufacture, on the other hand, are in a position to absorb costs as the commodity moves from one stage of production to another ultimately to become the object of consumer purchases. Here, also, the initial effect will be determined by both quality and quantity, but the qualitative element is considerably more important than in primary producing countries.

Within each country there are certain institutional factors which result from the particular economic and psychological climate existing at the time. Of these, probably the most important is production, for it is quite possible to increase production sufficiently to sbsorb cost increases if the demand for the production can absorb the growing supply of goods. Germany is the best example of a rapidly rising production rate which can raise real wages of labour and, at the same time, diminish its share of the national income. The stimulus for this remarkable achievement has been high real profits coupled with a labour surplus which weakened the monopoly position of Trade Unions. Credit control also played its part along with the accompanying monetary stability. In essence, the German economic policy has been directed toward compulsory saving to finance investment for expansion purposes.



Source: Board of Trade Journal, 19 February, 1955, p. 379.

The final determining factor is the ability of a national economy to produce under increasing returns, that is, the extra wage cost necessary to increase production must be less than proportionate to the production increase. It is this achievement which was made possible in Germany by a pool of unemployed and impossible in other countries with full employment.

Other institutional factors are important, but exist outside the process of production and, consequently, are outside the scope of the study. They largely depend upon the people and governments concerned as well as the world economic and political situation.

In analyzing the results of import costs increases, it must be remembered that other costs, including wages, enter into the final price as well as imported commodities. It would be a mistake to attach a degree of precision to the tables that is unwarranted. Relative positions of the nations of Western Europe, however, appear to be reasonably accurate so that the generalizations derived from them have some validity. The period chosen, 1947 to 1951 inclusive, was characterized by a considerable rise in import costs, which would be the major influence during the period. This is not to deny, however, that other minor influences were at work which may have augmented or diminished the initial impact. Some of these have already been mentioned, but a very important one, wage cost increases occuring simultaneously, is reserved for a later discussion.

For the United Kingdom, it is possible to compare the wholesale prices of manufactured products with the price of those commodities entering into them (see accompanying graph.) A 120.4% increase in the basic material index occurred from 1949 to March, 1951. The rise in the manufactured products index was 29.6% from 1949 to March,1952. This suggests a lag of about one year, depending on the level of

stocks, and an "absorption ratio" of 4:1. However, an unusually large number of wage increases were granted during 1951 which must have added to the price rises.

Since raw materials represent about 60% of manufacturing costs, the enormous rise in the basic materials index would be the dominant factor in the rising manufactured products index. This is not to suggest, however, that it always is, for as the basic material index fell from its Korean peak to the low point of February, 1954, a drop of 36.3%, the manufactured products index dropped by 3.9%, a ratio of 9:1; hence the assymetric appearance of a graph. Thus, while for analytical purposes, the processes are divided into imports cost rises and wage and profits increases, this is not to suggest that they are distinct separate movements. It is rather a matter of predominance of one over the other at a particular time.

CHAPTER 4

RELATIONSHIP OF ACTIVE AND PASSIVE INCOMES IN DISTRIBUTION.

The analysis of the effects of increases in wages or profits follows a similar pattern to that for imports. The distribution equation is the same with a few modifications in symbols. Whereas before the three conponents of production were imports, wages, and profits, etc., (the primary input as set forth in Table 19 of National Income and Expenditure, 1955), now , the division will be based on profits of companies as distinct from other incomes such as rent, professional earnings, traders etc. These latter are the incomes which, generally, are relatively fixed and tend to lose in the distribution of income during inflation. Income from employment and industrial profits, on the other hand, will gain from redistribution of real income in their favour. A convenient distinction between these income groups would be passive and active. [1] The former includes the fixed incomes, the latter the "producing" incomes, employment and profits.

In the distribution equation, these passive incomes will represent the independent variable. Again, it makes no difference mathematically, but it does have the advantage of economic sense. Just as imports costs are determined by influences outside the production process, passive incomes are extra-determined and are necessary expenses in a modern community. Hence, if Y represents the passive incomes and e and o the ratios of wages and profits respectively, nominal national income with constant production will be determined by [2]

$$N = \frac{Y}{1 - (e + o)} .$$

1. This is purely arbitrary and any income which has been passive could shift from the numerator to the denominator by simply demanding an increased share in distribution.

2. The derivation of this equation is exactly the same as that on page 18 , for imports with passive incomes, Y, as the numerator instead of I, imports.

There is a difference of primary importance between this equation and the first which was concerned with imports. In the first case, an increase in imports costs would result in the same percentage increase in prices if the distribution of income is to be constant. Here, however, an attempt to increase its distributive share by one active factor will result in a price rise determined by the size of Y. For example, should Y be small, and, consequently, the ratios e and o be large, an increase of $(e + o)$ of such magnitude that they approach unity would result in a price rise which would approach infinity. On the other hand, if P be large and $(e + o)$ small, an increase in active distributive shares could be accommodated by a rather small increase in the price level.

In any type of inflation it is the active incomes that are most capable of defending their share of the national income. Rising prices from whatever cause must mean an increase in real income for some sector of the community as well as a larger share of distribution; therefore, if the wage earner is in an active position, his share will remain intact. It has, indeed, often been observed of past inflations that wages lag behind prices, implying that wages are a less active income than profits; however, in a wages-price inflation, wages are active incomes and, as a result, gain a greater share of real income than do some other sectors, assuming, of course, that production increases are either non-existent or less than that required to support the wage demand.

Table VI.

Distribution of Gross National Product Before Tax

	1938 %	1948 %	1954 %	1955 % (prov.)	1955 (index) 1938 = 100
Wages and Salaries	54.7	59.2	59	60.5	111
Professional Earnings	2.28	2.05	1.67	1.69	83.4
Farm Income	1.33	2.94	2.45	2.29	172
Other Traders and Partnerships	8.9	7.8	6.4	6.25	70
Gross Profits of Public and Private Corporations	20.25	24	23.75	24.3	120
of which : Undistributed Income after taxation	5.72	9.4	9.2	10.4	184
Provision for Taxation	1.835	7.18	6.37	5.4	294
Total	7.55	16.58	15.57	15.8	209
Dividends and Interest	11.9	6.6	6.6	6.9	58
Rent	9.9	5.36	4.1	4	40.4

Source : Tables 2 and 3 of National Income and Expenditure, 1955.

The action of redistribution of income through inflation is clearly demonstrated by Table VI. The active incomes, wages and profits, have increased their shares considerably, at the expense of the passive incomes, professional earnings, traders, etc. Farm income has increased its share largely as a result of subsidies and rising food prices.

It is apparent from the table that active incomes represent about 84% ofthe gross national product, and passive, 16%. Thus, according to the equation, an increase in the nominal value of the gross national product of about 6.5% would result from an increase in the distributive share of the active incomes to 85%, with constant production and supplies.

From rising prices due to other inflationary causes, it is only a short step to an inflation which is the result of a deliberate policy on the part of one active sector to gain more of the real wealth than it had previously. It is really a question of moving from active defense of real earnings to an active offensive policy. As prices

rise as a result of increasing costs of labour or profits, a shift of real income occurs in favour of the active income sector. It is quite ridiculous, therefore, to suggest that wage gains will be wiped out by prices which have risen as much as the wage gain. In actual fact, they do not and cannot rise as much as wages because of limits imposed by passive incomes. Trade union gains are, therefore, real gains. In the above example, for labour to increase its share to 61% and profits to remain at 24%, an increase of 8% in nominal wages would be required. Obviously, labour gains in this case since prices will rise by 6.5% as passive incomes lose purchasing power.

As shown above, the larger the share of passive incomes, the less the rise of prices when an active income sector increases its share. If a particular trade in isolation were to demand a wage increase, there would be little or no price rise in consequence. What price increase would occur would be at the expense of all passive incomes including the wages of other less active workers. At the opposite extreme, if professional earnings, etc. were to shift from their heretofore passive state to become more active along with labour and profits, a considerable price rise would take place. This is evident from the equation of distribution, and should this take place, something approaching hyper-inflation could result. In this way, however, the gains of one active sector would be completely cancelled by price rises.

It has already been demonstrated that the share of wages in the national income has remained fairly constant in the short term, after allowance has been made for shifts of populations from one sector to another.[3] In the long run, the share of wages had increased throughout

3. Phelps Brown and Hart, "The Share of Wages in the National Income", Economic Journal, Volume, LXll, page 253.

the nineteenth and twentieth centuries with improved technology. The post-war development, however, has shown a rising share within a very few years. It is quite possible that these post-war rises of both labour and profits are only a quick process of development of what required many years to complete before the war. Considering the pace of technological progress in the post-war world, this may well be true. If not, further price increases are inevitable as passive incomes become more active. The only alternative is unemployment which, by reducing the number of employed workers, will reduce labour's income and, consequently, its share.

Kalecki has pointed out that the distributional share of the national income of wages in Manufacturing varies as the degree of monopoly (defined as the ratio of price to prime costs) and the ratio of raw materials to wage costs.[4] These factors have been responsible, according to his statistical analysis, for cyclical variations in the share of wages. Under the post-war full employment conditions, however, labour itself is in a strong monopoly position and is able to bargain for a larger share than before. It has, in other words, become active; whereas, in the past, profits and perhaps professional incomes etc were the active income sectors with labour a passive income. Now, however, a third income is added to the active group with the result that the economy becomes more sensitive to inflation. The problem is one of adjustment to the changed situation, with passive income sectors in a small minority.

4. Kalecki, Theory of Economic Dynamics, Allen & Unwin, Ltd., London, 1954, Chapter 11.

Government income likewise can be active in the sense that it can compete through the price mechanism for a limited national product. In the primary input analysis, indirect taxation was 15% of consumers' expenditure in 1950. This, of course, may increase just as much as the share of other incomes, and add further to inflationary price rises. Indeed, there is evidence that such is actually the case, for purchase tax increases, instead of reducing consumption of a particular commodity by adding to its cost, have only added to the general price level. Consequently, other active sectors defend their incomes against the fall in real earnings.

Obviously, the revenue derived from indirect taxation is essential for the finance of government expenditure, but it is unfortunate in that by adding to the level of prices it reduces real revenue as well as real earnings of the public. Therefore, by definition, the initial impact of taxes on expenditure is inflationary. As an "active income" maintaining its share of distribution, it heightens the effect of rises in other incomes. The influence can be shown by including the share of taxes, t, in the "primary input" equation of distribution; thus,

$$N = \frac{Y}{1 - (e + c + t)}$$

The denominator is smaller as a result of the inclusion of t as an active income with a constant ratio.

The essential difference, of course, between indirect taxes and income taxes is that the income tax reduces incomes before they are used for consumption. The consumption tax has become an integral part of the cost of living, and as such reduces real incomes by raising the price level. The active incomes, being in the most favourable position for defending real earnings, can

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shift the real burden of consumption taxes to the passive incomes through the process of inflation. Therefore, the income tax may be the "better" tax in that it reduces the consuming potential and is, consequently, anti-inflationary while the consumption tax which derives its revenue from an increase in the price level without any appreciable loss in demand in relation to supply contributes to rising prices.

The reason for this is by no means obscure. Commercial advertising has become an integral part of economic life; obviously, it is a worthwhile investment, for the returns must justify the outlay. In view of the tremendous pressures to which the consumer is subjected that encourage him to consume, a tax or even exhortation by the Chancellor of the Exchequer to discourage consumption will surely fail. The consumer will, of course, escape by increasing his income if he is in a position to do so. At that point, the consumption tax becomes more remunerative to the government and, therefore, essential to it as a source of revenue. Modern selling techniques assure the government revenue, but likewise assure the domestic consumption of goods when otherwise would be exported. If this is the primary aim of the purchase tax it must fail. The mistake, of course, is the use of a tax which attempts to alter the free play of supply and demand on the market. These market forces are too strong and resistance to income demands by active sectors too weak for the consumption tax to be anything but inflationary.

Up to this point, two important aspects of the wages-prices spiral have been discussed. The first was concerned with the effect of a cost increase of imports, which represents 20% of primary input in the United Kingdom. There, the conclusion was reached that regardless of the relative size of imports, a

given percentage increase in costs must result in the same percentage increase in other incomes, and the same percentage increase in price if no change of relative position in distribution were to take place. This is subject to cushioning effects of quality of imports, or the stage of production at which the imports are used, and the quantity, that is, the degree of disruption of relative distributive positions becomes greater the larger the quantity and the more finished the imports.

The second was concerned with a different aspect of the spiral, although it may, and probably will, follow as a result of the first. Primary input incomes were classified into "active" and "passive", passive representing the numerator, and active the denominator of the equation of distribution. The larger the numerator, the smaller will be the price increase resulting from an increase in the share of the active incomes. If the passive incomes are quite small and the active incomes consequently large, the price increase may be considerable.

CHAPTER 5

FORCES TENDING TO LIMIT AN INFLATIONARY SPIRAL OF PRICES AND WAGES .

a. Wage Restraint.

This leads directly to the first damping influence which brings the spiral to a "converging point". The more passive incomes become, the greater the chance of containing both a wages-prices-spiral and rises in imports costs. Wages, for example, will become more passive as wage contracts become longer. Since the duration of most contracts appears to be about one year when an annual review takes place, claims for higher wages occur at regular annual intervals depending on such criteria as the index of retail prices, the state of profits, or the gains made in other industries. Were it possible to extend these reviews to two years or even five years, considerable stability of wages and prices could be achieved. This would, as already suggested, reduce considerably the "activeness" of labour income; hence, the speed of the spiral would be reduced. As a result, other damping influences such as increased production resulting from new investment would have time to operate. Since Income from Employment represents 47% of Final Output [1], this would have considerable effect in checking the spiral.

A policy of "wage-restraint" designed to encourage trade unions to moderate their wage demands has, of course, the same result. This was the aim of the Labour Government in its White Paper of 1948 which urged restraint in wage demands since general increases in wages without corresponding production increases will merely raise production costs and hence prices. [2] The paper

1. Table 19, National Income and Expenditure for the United Kingdom, 1955.

2. Cmd. 7321, "Personal Incomes, Costs and Prices".

allowed for some increases in wages that were unusually depressed as a result of cost of living increases; these, in other words, were to be active incomes which, if in a sufficiently small minority, could be easily absorbed by the large number of passive incomes without a price rise.

To examine "wage restraint" as suggested in the White Paper, quantity of production must be considered. Using again the primary input required to produce final output, the ratios e, o, and t can be expressed as $e = \frac{E}{PQ}$, $o = \frac{O}{PQ}$, and $t = \frac{T}{PQ}$, absolute wage costs, profits and indirect taxes, over price times the quantity of goods. It is obvious from inspection that if E increases by a certain percentage and Q increases by the same percentage, the ratio e will remain constant. The same, of course, is true for profits and indirect taxes. Active incomes will gain in real income by the percentage increase since prices are constant. Passive incomes, however, will gain nothing. Should there be complete income restraint so that absolute incomes are the same as before the production increase, both active and passive incomes will gain in real purchasing power by lower prices. The gain for active incomes, however, will be less than if they had increased absolutely with prices constant. The differenne between the two situations is a slightly greater share of distribution for active incomes and a slightly smaller share for passive incomes in the former, and constant distributive shares for both in the latter. In effect, the benefits of increased production accrue to the active incomes in the former case, and are equally distributed in the latter. It is, therefore, to labour's advantage to press for wage increases.

In the"wage freeze" suggested by the government, there was a loophole which permitted wage increases for the purpose of attracting labour into industries that were undermanned. The basis of this was to increase national production by applying labour to the most advantageous use. This could only succeed if the production increase were greater than the increase in wage costs offered as an incentive. Under full employment, labour tends to be immobile so that the wage incentive fails to attract the labour force required. Overtime working, it appears, is the major attraction for employees, for manufacturing industries have steadily increased their labour force, absorbing much of the increase in total working population in civil employment. Basic industries have steadily lost employees despite high wages in certain industries such as coal mining. The evidence would suggest that higher wages are not as powerful an incentive during full employment as working conditions which tend to be inferior in basic industries to manufacturing.

Furthermore, trade unions find it easier to secure wage increases fromtheir current employers than to undergo the dislocation of changing jobs. An examination of the cases of wage disputes which came before the Industrial Disputes Tribunal shows that the majority of Trade Unions in bargaining for higher wages consider their wage inferior to those in similar industries. While this argument may well be used merely as a "lever" for securing wage gains for other reasons, it implies by its existence that mobility of labour is almost non-existent. Perfect mobility would result in wage differentials sufficient to account for differing working condition, skills, etc. so that if the argument has any validity it would imply that only the marginal labourers and the recent additions to the working

population could be attracted to the undermanned industry.

In spite of the vague generality of the White Paper, it was accepted by the Trades Union Congress, and some stability (or "passivity") of wages did result. Political sympathies probably were largely responsible for its acceptance for, with a change of government, wages restraint was abandoned. Profits, also, were considered excessive and the sentiment of the Trades Union Congress changed in favour of higher wages and lower profit margins. [3] This meant, of course, an attack by one active income on another, which can only result in retaliatory measures in the form of higher prices and a greater distributive share for both.

It is hardly to be expected that wage restraint as a policy could succeed during a period of rising prices resulting from rising costs of imports. However, any attempt at a wage freeze must be accompanied by clear definitions of what constitutes a "reasonable living standard" and reasonable profit margins. Failure to do this means broad interpretations that are too vague to have any meaning. Now obviously such concrete definitions are quite impossible. The varied nature of economic uncertainties makes any attempt at precision in definition ludicrous. Failing this, the only other method of imposing wage restraint from above is by statutory means which could, as in wartime emergency, impose a wage freeze. This, of course, is not outside the realm of possibility, but, as the White Paper

3. "Congress declares that wage increases can be met without resulting in increased prices, for example by reducing profits, and, therefore calls on the General Council to abaddon any further policy of wage restraint and at the same time urges the Government to introduce statutory control of profits."
82nd Annual Report of the Trade Union Congress, 1950.

suggested, this would amount to a "limitation of contract" which the government preferred not to do.

A more practical form of wage restraint could take the form, as already suggested, of longer wage agreements. Such a measure should not be abhorrent to labour as it would offer a guarantee of greater security. Since this motive of security appears to be in predominance in so much of the economic activity of both labour and management, a guaranteed wage with assured employment over a longer period could do much toward increasing the passivity of labour incomes. From the employer's side, the greater security offered by an assured labour force and a fixed wage cost for a longer period would give him more freedom of action in fixing prices and securing orders for his products and a more risk-free margin of profit. Technical improvements could be introduced without the danger, within the immediate future, of rising wage costs reducing the profitability of investment. Wage restraint in this form would greatly add to the stability of the price level by reducing the speed of rising wages and the cost of living. Increased production could add its own stabilising influence as the results of technical improvements became available. It is not the level of wages or profits that is important in a wages-prices inflation, but stability over the longest possible period. This stability must come from both labour and employers rather than from government law or directive, for only then will the necessary freedom of contract be preserved which is essential for the successful negotiation of individual wage agreements.

b. Production increases.

In analyzing production increases, the exact meaning of the term should be clear at the outset. Production increases as a result of rises in output per man hour are very different from increases resulting from overtime or incentive payments. In the term $e = \frac{E}{PQ}$, wage payments, E, can increase in proportion to increases in Q, production, without changing the ratio e. This would be equivalent to production increases per man-hour. However, if, to secure greater production, higher wage payments are required to bring forth rises in Q, they may or may not be proportionate. The difference, in reality, is one of approach, for, as is shown below, wage increases if not accompanied by rising output per man-hour, will require more than proportionate increases in production for prices to be constant. This arises from the fact that labour is increasing its share of the national income and it is profitable for the employers to acquiesce. Thus, though the approach in the ensuing analysis is from the side of price and quantity of production, this is not to suggest that prices rise necessarily as a result of share increases. They may well be the initial cause; hence, the condition of constant prices with greater increases in output than in wages, probably exists only in theory.

As already suggested, production increases are an important damping influence on prices. The final member of the primary input group, "gross profits, other trading income and rent", must be split into "gross profits", an active income, and "other trading income and rent", a passive income. This

approaches reality as reference to Table V1, page 48, will indicate. It is these passive incomes that have shown the greatest drop in distributive share since pre-war. To examine production increases in greater detail, the relationship between production in two periods must be found. This is done as follows :

Let Q_1 = production (1st period), Q_2 = production (2nd period)
P_1 = price (1st period), P_2 = price (2nd period)
I = unit value of imports; Y = other incomes
e = ratio of labour costs; o = ratio of profits;
t = ratio of indirect taxation.

(The quantities IQ and Y will refer to passive incomes; the quantities ePQ, oPQ, tPQ will refer to active incomes.)

Then, $P_1Q_1 = IQ_1 + eP_1Q_1 + cP_1Q_1 + tP_1Q_1 + Y$

rearranging terms gives

$$Q_1 = \frac{Y}{P_1 (1 - e - c - t) - I}$$

For the sake of convenience, let

$$1 - e - c - t = x;$$

then, $$Q_1 = \frac{Y}{P_1 x - I}$$

In the next period, a change in the distributive shares occurs so that 1 - e - c - t (which will be referred to as z) is less than x. The new quantity of production at the new price level will be, by analogy,

$$Q_2 = \frac{Y}{P_2 z - I}$$

The relationship between Q_1 and Q_2 will be

$$\frac{Q_2}{Q_1} = \frac{P_1 x - I}{P_2 z - I} \quad (P_1 = 100).$$

Should any factor of production increase its income beyond the limit that increased production can accommodate (the limit of labour, for example, would be $\frac{dE}{E} = \frac{dQ}{Q}$), the distributive share must rise according to $e = \frac{E}{PQ}$. Therefore, the quantity z will be less than x, and the price level will rise accordingly. Also, should one distributive share increase, owing to a considerable rise in absolute income, production must increase enormously for prices to remain constant. This can be seen by inspection. Suppose the increase in share is great enough to result in the quantity Pz (constant prices) approaching the level of I. Quantity of production will have to approach infinity in order to maintain constant prices.

In this form, also, the distribution equation is useful, for, as shown above, the effect of an imports cost increase on prices can be easily determined. The period 1946 - 1948 was characterized by no change in x since labour maintained its share of distribution and the loss of the profits share was countered by an equivalent gain in the share of indirect taxes. Passive incomes, of course, lost both in purchasing power and in share of distribution, but, since they cancel out in the solution of the equation, need not be considered.

Again, the success of Germany in keeping prices down during imports cost rises is more apparent. Q_2 was considerably greater than Q_1 with the result that, as the denominator became smaller with an increase in I, the price level P_2 could equal P_1. And as production increased still further, the quantity z could decrease, indicating an <u>increase</u> in the share of one or more incomes, (in this case, largely profits).

For the nation with high values of I in relation to final output, the inflationary situation is much more obvious, for, as I in the denominator grows, the value of the denominator will be more nearly zero than if I were low. An increase in shares, resulting in a falling z, will make the denominator even smaller if prices are not to increase. Production, therefore, must increase enormously, and, if this is not possible, prices must rise.

The "inflationary potential" via wages and prices of Great Britain can be seen more clearly by rearranging the above proportion so as to solve for P_2.

$$P_2 = \frac{Q_1P_1x + I\,(Q_2 - Q_1)}{Q_2z}.$$

Price will vary inversely as the new production multiplied by I minus the new ratios of distribution and directly as imports multiplied by the production increase. The greater the size of imports, the less the effect of production in reducing prices. Suppose, in order to stimulate an increase in production, there is a rise in wage costs more than proportionate to the rise in production (see above, page 35). This would constitute a rise in distributive share of employment income which, with profits and taxes as active incomes as well, would be won at the expense of passive incomes. Assume that a 10% increase in wages is necessary for a production increase of 3½%, then $Q_1 = 100$, and $Q_2 = 103.5$. Therefore the equation above will read

1. $$P_2 = \frac{100P_1x + I\,(103.5 - 100)}{103.5z}$$

In addition, P_1, the old price, equals 100, and imports are

assumed constant at 18 (Table 19, National Income and Expenditure), although, since they are passive and "extra-determined", they may be any figure. x = 1 minus the old active income ratios, and z = 1 minus the new.

$$x = 1 - (.48 + .1345 + .10) = .2855$$

$$P_2 = \frac{(100 \times 100)\ (.2855) + 18\ (3.5)}{103.5z} = \frac{2855 + 63}{103.5z} = \frac{2918}{103.5z} = \frac{28.2}{z}$$

It is now necessary to determine the quantity z (1 minus the new ratios of distribution).

The assumption is made that wages increase 10%, and that other active incomes, gross profits and indirect taxes, increase sufficiently to maintain their shares. For convenience, let the ratios of other active incomes, profits and indirect taxes, equal x, and passive incomes equal Y. From the original distribution equation on p.18, the absolute value of the new employment income, E, can be written

$$E = \frac{e_2\ (I + Y)}{1 - (e_2 + x)}$$, with e_2 equal to the new ratio of distribution which is to be calculated.

Rearranging terms gives

2. $$e_2 = \frac{E\ (1 - x)}{I + Y + E}$$

Imports are assumed constant at 18, passive incomes (Y) = 10.55, and the new E = 52.7.

$$\text{Then } e_2 = \frac{52.8\ (1 - .2345)}{18 + 10.55 + 52.7} = \frac{40.4}{81.25} = .497$$

Therefore z in the first equation will equal 1 - (.497 + .1345 .10) = .2685, and $\frac{28.2}{.2685} = 105 = P_2$.

The price level of final output will be 5% higher as a result of a 10% increase in wages (E), if the shares of other active incomes are constant.

The method of solution for prices of consumers' goods is exactly the same with differemt values as taken from Table 19, National Income and Expenditure. Prices of consumer goods increase by 4%.

Assuming that no increase in production takes place, the solution is analogous. In equation 1, the values cancel, of course, so that the numerator is equal to 100x. The result is a 6.8% rise in prices of final output from a 10% wage increase. For consumer goods, a 6% rise in prices results from a 10% wage increase. This, of course, in based, as is all this analysis, on the assumption that other active sectors, profits and taxes, do not accept a smaller share of distribution. Broadly, this had been true during the post-war period.

The difference between the price rises of consumers' goods and final output [4] is accounted for by the larger-share of wages entering into final output than into production of consumers' goods, for the latter, 38%, and the former, 47%. This, obviously, means a smaller share for the other active incomes. Indirect taxes are 10% of final output as against 15% of consumer goods, and profits are 13.45% of final output and 15.12% of consumer goods. Exports consist of 52% employment income so that the price rise would be even greater. The implications of this, of course, are obvious, during a period of high competition for export markets.

To maintain constant prices, production would have to increase by about 15.6%. Clearly, then, it is to labour's advantage to increase wages with or without increases in production, for prices will rise much less than wage costs, assuming, of course, that passive incomes remain passive.

4. See Table 19, National Income and Expenditure, for the constituents of final output.

As suggested in the introduction to this section, output increases per man-hour can accommodate increases in wages without a change in the share of total income. Extension of work through overtime, however, can only be profitable under conditions of rising prices, for this will mean an increase in the share of labour. Obviously, if "time and a half" is the wage payment for overtime, production will not increase by a "unit and a half". The extra wage payments, since they are not met out of an equivalent increase in production, must either come from the income which ordinarily would be included in the profits sector, or from higher prices if the profits sector is to remain intact. The extent of these higher prices has already been analysed.

A further source of increase of labour's share of income is, of course, rising wages per hour which are greater than increases in output per man-hour. In this case, incentive payments, bonuses, etc., designed to encourage greater production, would constitute the redistributing influence if production does not increase in the same proportion as wage payments per hour. Once the action of redistribution has begun, however, production increases from any source are effective in reducing the rise of prices.

After the process of redistribution has taken place, and prices have accordingly risen, there is only one acceptable means of restoring the original pattern and the original price level. This is by increasing the effectiveness of labour to such an extent that output per man-hour rises, resulting in lower prices and the old distribution pattern of incomes. It is difficult, however, to conceive of such a circumstance unless demand should become sufficiently elastic through competition to encourage a reduction of prices. This would only be true in export markets,

for, domestically, as is demonstrated later demand will tend to be inelastic, at least as prices rise. It would, therefore, hardly be worth while for entrepreneurs to reduce prices as output increases until domestic demand is completely satiated at the higher price. The share of the profits sector, in other words, will remain at the new high level or increase as domestic prices tend toward stability downwards.

The other means (now considered politically unacceptable) of restoring the original distribution pattern and lower prices is by unemployment. In the past, the trade cycle has performed this function as Kalecki has shown (see above, page 50). If full employment is to be maintained from the supply side, output per man-hour must increase without corresponding wage cost increases. From the side of demand, measures to increase elasticity must be taken so as to reduce the share of profits as output per man-hour increases. The difficulty is, of course, to accomplish this without reducing employment below the "politically acceptable" level.

The analysis so far has shown that a fundamental factor in the wage-price spiral is rising wage costs with less than corresponding production increases. These result in an increasing share of labour with consequent price rises. However, this is not to suggest that isolated cases of overtime working, etc. are themselves inflationary. It is only when this becomes the general practice so that wage costs in the aggregate are rising that inflation results. If overtime working were counterbalanced by short time working, for instance, the net effect would be a constant distributive share. In a particular industry, overtime, etc. could be an effective method of attracting labour to the industry which has an exceptionally

high demand for its products. This would relieve the pressure of demand in the overtime industry and decrease the supply in relation to the demand in another industry where short-time working is in practice. The ultimate effect would be no increase in the distributive share of labour. This, naturally, depends upon labour's mobility which, at the moment, tends to be quite low.

Percentage of Operatives in Manufacturing Industries working overtime as of November,[5]

1952	1953	1954	1955
22.1	26.5	28.5	30.0

The amount of short-time working is extremely low, less than 1% for 1954 and 1955. Further, output per man-hour has been increasing on an average of 2.4% per year, while earnings, wage rates plus overtime, bonuses, etc., have increased by about 11% between 1952 and 1955. According to the above, this would result, with constant costs of imports, in about a 5% rise in prices of consumers' expenditure.

From the point of view of shares of gross national product (as distinct from the primary input analysis) labour's share varies roughly inversely as output per man-hour.

5. Ministry of Labour surveys published in the Ministry of Labour Gazette for January.

TAbLE Vll.

Year	1 Ratio of Income from Employment to G.N.P. of Manufacturing.	2 Index of Income from Employment	3 Output per Man-hour in Manufacturing	4 Index of Industrial Production for Mfg.	5 Price Level
1948	64.6	100	100	100	100
1949	65.2	107	104.8	107	99
1950	63	114	110	116	101
1951	62	127.5	110.5	121	108
1952	66.6	136	107	115	115
1953	66.6	148	112	123	117
1954	65.5	161	116.8	133	119.5

Source: Column 1 - National Income and Expenditurem 1955, Table 14.
Column 2 - Ministry of Labour Gazette
Column 3 - Calculated from Tables 128, 141 and 146 on Annual Abstract of Statistics, 1955.
Column 4 - Table 13, National Income and Expenditure, 1955
Column 5 - Tables 10 and 13, National Income and Expenditure,1955.

There is some significance in the fact that a 10% rise in out-put per man-hour, 1948 - 1950, reduced the share of wages from 64.6 to 63 at constant prices and with a 14% increase in employment income. The damping influence on prices of output per man-hour is most apparent at this point. From 1951, a high point in production and import cost increases, a drop in output per man-hour occurred with a considerable increase in the share of wages, and from this recession year, a "normal" position of all indices was resumed.

The increasing reliance on overtime, etc. to raise industrial production can be seen by comparing the increases in the index of industrial production with those of output per man-hour. During 1948 to 1950, the percentage increase in output per man-hour was well over half the production increase; however, from 1951 to 1954, the increase is equal to or under one half. Again, 1951 to 1954 is the period of the greatest rise in prices. There is little doubt that there is a close connection

between the two, though it is difficult to say whether prices rose because of rising labour costs, or whether it was profitable for manufacturing to increase production by offering more incentives because of rising prices.

In conclusion, the statistics appear to confirm the results of the theoretical analysis, that output per man-hour is of the greatest importance in checking the wages-prices spiral. Other forms of production increases that are based on incentive payments tend to be inflationary by increasing the share of wages. Further, by adding to demand more than prices, they increase inelasticity of domestic demand making it possible for prices to rise. Isolated cases of incentive payments to increase production can well be dis-inflationary by re-allocating labour to a more advantageous use. In ordinary circumstances these would be countered by other industries which have a surplus of labour so that, in the aggregate, the net inflationary effect would be small or nil. With a general shortage of labour, however, wage payments as incentives become subordinate to other factors such as working conditions. A high wage differential is, therefore, required to maintain a labour staff in basic industries with less pleasant working conditions.

In order to secure rises in output per man-hour, industry must invest in sufficient capital to increase the effectiveness of labour. Automation, the logical extension of this type of investment, may result in some temporary redundancy requiring re-training labour. In the long run, such technical innovations may well result in over-production, or under-consumption, if exports markets are incapable of absorbing the excess; hence, unemployment could be the

result. This problem, of course, will require its own solution depending on the circumstances of the time; however, at the moment, the problem is a very different one, a solution of which appears to be the most efficient utilization of scarce labour resources.

Most investments require varying amounts of time to produce results, and, in this regard, wage and profit restraint would do much toward reducing inflationary pressures until the results of investment were forthcoming. It was suggested that a lengthening of the wages agreement would serve a far more useful purpose than would the imposition of restraint by government directive. In any circumstances. a slowing of the spiral would be anti-inflationary by contributing to stability of wages and prices. The more passive incomes become the more stable the economy.

Fixed incomes, those that lose in the struggle for distributive shares, may become active when, and if, they desire to increase their real incomes. They would, in terms of the equation of distribution, shift from the stabilizing numerator to the active denominator. Should this occur, prices would then rise to new levels which would cancel the gains of any one active income leaving no income better off than before. This, of course, would constitute a violent wage-price spiral which would be very difficult, if not impossible, to control and which would culminate in severe unemployment.

In the primary input equation (above p.51) indirect taxes were treated as an active income requiring a percentage of distribution in the same way as other active incomes. Under conditions of inelastic demand, consumers are not deterred from purchasing because of high prices; instead, they will attempt to increase incomes and their distributive share. By acting through

the price mechanism, the purchase tax must contribute to rising prices and inflation, especially when it represents an active income sector. It would appear that the inflationary potential of the economy could be reduced by cutting the consumption tax to the minimum and relying on, principally, the direct income tax for revenue, thus serving to reduce consumer demand. However, the arguments, pro and con, of the merits of taxation systems cannot be entered into here.

One final word should be added before concluding this section. The system described in the preceding pages, while it probably relates reasonably closely to the inflationary situation of wages and prices, is purely static. In reality, the distinction between active and passive incomes is artificial, reflecting only tendencies so that while labour tends to be active many unorganized forms of labour, in agriculture for example, will be passive. There will be continuous shifting from one class to another as attempts to increase real income are made. Perhaps the best description of these shifting incomes and their tendencies is found in the following table extracted from the Financial Times :

TABLE V111.

Redistribution of Income via Inflation (Percentage Change)

	1945 - 1951				1951 - 1955			
	Gross Salary	Tax	Value of Money	Net Change in Purchasing Power	Gross Salary	Tax	Value of Money	Net Change in Purchasing Power.
Civil Service:								
Higher Clerical Officer	+25	- 44	-24	+ 4.8	+14	- 38	-14	+ 2.4
S'r.Exec.Officer	+20	- 33	-24	+ 4.4	+15	- 18	-14	+ 5.2
Asst.Secretary	+27	- 3	-24	+ 8.6	+11	- 10	-14	+ 2
Bank Clerk	+ 6	-100	-24	-15.7	+39	0	-14	+20
Graduate Schoolmaster	+28	- 44	-24	+ 5.2	+13	- 54	-14	+ 1
General Practitioner					+ 6	- 15	-14	- 1.5
Dentist					+25	+ 8	-14	+12.3
Local Government:								
Town Clerk					+10	- 9	-14	+ .8
Burgh Engineer					+11	- 18	-14	+ 4.3
Asst.Solicitor	+20	+10	-24	- 7.1	+ 7	- 58	-14	+ .4
Assistant Architect	+28	- 5	-24	+ 7.0	+13	- 25	-14	+ 5.9
Lieutenant Colonel	+33	0	-24	+10.2	+10	- 32	-14	+ 3.8
University Professor								
Arts	+31	+41	-24	- 4.2	+16	- 27	-14	+21.3
Medicine	+10	+11	-24	- 6.1	+11	- 27	-14	+ 9.5
Industrial Worker	+ 37	-36	-24	+ 8.5	+31	-100	-14	+15

Source: Financial Times, 11-2-56.

These sample incomes, representative of types, show the effect of inflationary redistribution in favour of the industrial worker. Especially is this true during the period 1951 - 1955 after wage restraint had been abandoned. The Times included in its text the fact that incomes of Bank Clerks, Dentists and Arts Professors were well below their traditional level in 1951. At any rate it will be apparent which incomes tend toward activeness and

which tend toward passiveness. The effect also of the deliberate, though perhaps not conscious, policy of the industrial worker to gain greater purchasing power at the expense of other incomes is clearly seen.

It is, therefore, necessary to "dynamize" the static equations, for without the dynamic element, the process of a wages-prices inflation would never exist. The static distribution in favour of a particular active income with its accompanying price rise would be the end. It is the attempts to frustrate this new static distribution pattern which give rise to the dynamic process of a spiral of rising prices and wages. These attempts are only partially successful in the short-run and may be completely so in the long run, depending on the circumstances of the time. Evidence from the past suggests that the more powerful influences of technological progress, and other determinants of economic change, rather than Trade Unions or Employers' Organizations, finally determine the distribution of total income. This is not to suggest, however, that this will always be true.

Also included within the dynamic process are the time intervals between a cost rise and a corresponding price rise. The results of the analysis can only be approximations, for the time taken for a wage or profits increase to be noticed in final price will depend on the time taken by the production process. There are, of course, as many different periods of production as there are commodities produced. Generally, speaking, however, prices will react more quickly to

permanent increases in cost, such as wage rises, than to what may be regarded as temporary cost increases such as imports. A measure of price stability will be preferred by the entrepreneur as well as the consumer. The evidence suggested in the annual Economic Survey points to price reactions within a year.[6] This, however, must be a general average.

6. See, for example, Economic Survey, 1955 and 1956, pages 31 and 18.

CHAPTER 6

INDUSTRIAL OUTLOOK OF LABOUR

As has been demonstrated by means of a distribution equation, active incomes are the primary determinants of the price level. The income sectors which tend toward activeness are, of course, labour, profits, and indirect taxes. Within the limited scope of the study, little, unfortunately, can be said regarding the latter. The possibility of reducing inflationary pressure by removing one active sector is a matter for the government to consider. The former, labour and profits, will occupy the major portions of the work, and it is the labour sector which is the subject of this section.

The schematic system outlined in the last section will be followed with the emphasis on the active incomes themselves rather than on damping influences. The proportions of the five income sectors to final output can be expressed for the years 1948 - 1954.

TABLE 1X

Ratios of Income Sectors to Final Output, (including stock appreciation).

Year	e	Index e	o	Index o	t	Index t	Y	Index Y	I	Index I	Price level of G.N.P.
1948	48.6	100	12.65	100	10.5	100	12.45	100	15.9	100	100
1949	48.2	99	13.1	104.5	9.85	93.7	12.45	100	16.25	102	102.5
1950	48	99	11.9	94	10.1	96	12.13	97.5	17.85	112	103.5
1951	45.7	94	12	95	9.77	93	10.5	89.4	22	138.5	110.5
1952	47	97	13.35	105.5	9.75	93	11.4	91.5	18.45	116	121.3
1953	47.5	98	13.86	109.5	10	95	11.4	91.5	17.2	108	124
1954	48.2	99	13.95	110	9.5	90.5	11.2	90	17	107	126
1955@	48.7	100									

@ - estimate
e = employment income, Y = "passive incomes", o = profits, t = indirect taxes, I = imports

Source: Tables 1, 7 and 52, National Income and Expenditure.

The relationship between E, absolute employment income, and e, the ratio of employment income to final output, can be expressed mathematically using the equation of distribution. It has been shown that the value of final output will be determined by passive incomes plus imports divided by I minus the ratios of active incomes,

$$\frac{Y + I}{I - (e + c + t)}$$

Obviously, therefore, the absolute value of employment income, E, will be determined by

$$E = \frac{e(I + Y)}{I - (e + c + t)}$$

According to the equation, I+ Y can increase faster than E and result in a declining e. The above table shows this process happening as the peak year of the rises in imports cost occurred in 1951. The round of wage increases, which occurred in 1951, was more than offset by a rise in imports cost so that through price increases labour was losing its relative distributive share position. The movement back to t the original share is clearly seen and probably was completed in 1955. This would leave the burden of income loss largely on passive incomes, Y, for they have steadily lost their relative position.

Profits, o, have shown considerable variation, and, in 1952, when profits, before allowance for stock appreciation, were low, the share of profits rose, after allowance for stock appreciation. Consumer prices rose considerably in 1952 so that with falling import prices, the cost of stock replacement dropped, causing an increase in the share of profits.

The argument thus far has been that price rises are caused by increases in the distributive share of one or more active sectors at the expense of passive sectors. This occurs when production increases are insufficient to accommodate the increased income.

An increase in price from whatever cause must result in an income increase for at least one sector and, therefore, an increase in the share. The opposite, of course, is true in that an increase in one sector's income will result in a price rise and an increase in that sector's share. It will now be necessary to examine the nature of employment income so as to determine the conditions which lead to income increases.

It was shown in the last section that labour has much to gain from rising prices which result from wage increases since prices will not rise as much as the wage. As an active income sector, the wage earner benefits from inflation in the form of an increase in real income. Furthermore, the smaller the active sector in relation to other sectors, the greater will be the gain. It is this rise in real income that is the principal reward for organised labour where limitations to membership in the union and the closed shop create the conditions of monopdy necessary for the exclusion of competitive labour. In such a case, the trade union would be increasing its real income at the expense of potential competitors who are unorganized and represent a passive income sector.

Considerable literature has grown up regarding the nature of the "labour market" and the determination of wages.[1] But, in the last analysis, wage levels are determined not by the economic laws of supply and demand but by the agreement between an employer's organization on the one hand and Trade Union representatives on the

1. J.E. Meade, Planning and the Price Mechanism, Allen & Unwin,1948, H.C. Simons, Economic Policy for a free Society, University of Chicago, 1948, W.H. Beveridge, Full Employment in a Free Society, and, of course, J.R. Hicks, Theory of Wages, Macmillan, 1935, are a few which deal with the problem in various ways.

other. The upper limit will be determined by the demand made by the Union and the lower limit by the offer made by the employer's representatives. The wage level will be decided within these limits depending upon the relative strength of the two parties. If no agreement is reached, a government-appointed body will make the final decision. Probably one need look no further than this for determinants of wage levels for even wages of unorganized labour will tend to move in sympathy with Trade Union gains especially during conditions of full employment. Within the upper and lower limits, the wage level which represents the compromise will require close analysis.

If this be accepted as true, the first step should be an examination of the motives of Trade Union action in seeking higher wages. From these motives a general policy should emerge, the results of which increase labour's share of distribution through higher prices.

An examination of the cases coming before the Industrial Disputes Tribunal which were concerned with wage claims revealed the following arguments in order of frequency of occurrence.

	Frequency	Percentage of Total
1. The current wage is inferior to others in similar industries.	94	45
2. The retail price index has increased (and, in some cases, fails to represent the cost of living).	71	34
3. Productivity in the industry has increased; hence the employers can afford to pay higher wages.	19	9.1
4. Differentials within the industries should be protected.	15	7.2
5. The industry is undermanned as a result of a low wage; hence both employer and employee would benefit from an increase	5	2.4
6. The sliding scale agreement based on the retail price is inadequate and should be revised.	4	1.925
Total	208	

Obviously, the first two appear to be of primary importance so that it is difficult to say which is the more significant. The first implies a wage "leader" that, presumably, must have a reason for seeking higher wages without making the claim that the wage is inferior to others. This also may be only an excuse designed to indicate to the Tribunal that the particular wage is unduly low and should be raised in the interests of social justice. It would, however, account for the recurring rounds of wage increases that have been a characteristic of the post-war economy.

a. A defence of wages against rises in the cost of living.

Since the cost of living, or the retail price index, is an external influence of the greatest importance, (an influence outside the wage structure), it may be well to begin with an analysis of the Interim Index of Retail Prices in order to determine its effects. There will be three logical stages in the analysis : 1. the influence of certain commodity prices on the retail price index, 2. the influence of the index on wages, and 3, the influence of these wages increases on the general price level. Ultimately, through this chain of influences, it should be possible to decide if a certain level of retail prices is reconcilable with stable prices and wages under full employment conditions.

The first and strongest influence on the retail price index is, of course, Food. For convenience, Drink and Tobacco will be considered along with Food since this appears to be the general practice. Using the input-output table in the Blue Book it is possible to estimate the amount of these commodities that are domestically produced in relation to retained imports. Apparently, Great Britain produces slightly under one half of its food

requirements, 48.5%, and imports 51.5%.

TABLE X.

Year	1. Index of Food Prices Weight: 399	2. Index of Drink Prices Weight: 78	3. Index of Tobacco Prices Weight: 90
1948	100	100	100
1949	105	97	102
1950	112	93	103
1951	122	95	104
1952	136	97	105
1953	142	97	105
1954	147	98	105
1955 @	157		

@ - estimate

Effect on Interim Index of Retail Prices (Percentages)

Year	4 Food	5 Drink	6 Tobacco	7 Total	8 Actual Increase in index	9 Column 7 / Column 8	10 Increase in Wage Rate Index.
1949	+1.95	-.23	+.18	+1.97	2.8%	70%	2.7%
1950	+2.62	-.312	+.09	+2.41	2.7%	89.5%	2.0%
1951	+3.5	+.156	+.09	+3.746	9.7%	38.6%	8.5%
1952	+4.87	+.156	+.09	+5.116	8.8%	58%	8.5%
1953	+1.75	0	0	+1.75	3.0%	58.4%	4.5%
1954	+1.365	+.078	0	+1.443	2.2%	65.6%	4.0%
1955 @	+2.73				4.5%	61%	7.0%

@ - estimate

Source - Columns 1 - 3: National Income and Expenditure, 1955, Table 23
Column 8: Annual Abstract of Statistics, 1955, Table 338
Column 10: Annual Abstract of Statistics, 1955, Table 142.

An examination of the table will indicate the influence of Food, Drink and Tobacco on rises in the cost of living index. In only one year, 1951, was the influence less than the weighting of 56.7%. In 1949 and 1950, rising food prices were responsible for the largest share of the rise in retail prices. Now, assuming that wage rates respond closely to the retail price index, as the above table would indicate, with an appropriate time lag, the price level of the gross national product would respond to wage increases at the ratio of 2 : 1, (see page 63above).

This would suggest

that sooner or later the retail price index would rise by about that ratio. The increase in wage rates in 1949, for example, of 2.7% would result in a 1.35% rise in the index of retail prices. In view of the 1.97% rise caused by Food, Drink, and Tobacco, this would make a total percentage increase of 3.32 in the index of retail prices; hence the spiral of wages and prices is begun, in this case by food cost increases. In these two years, the foundation, in effect, was being laid for further increases in the retail price index in the ensuing years, for the pressure of rising wages combined with rising imports costs would force the index higher through the other components of the price index.

It is very difficult to estimate the time lag between rises in food costs and the rises in retail prices of manufactured products which result from the increased wage rates demanded by Trade Unions as a compensation for the original food price rise. This is, in reality, a complete circle of the spiral, for by the time increased prices resulting in higher wage costs are reflected in the retail price index, rising food costs may well exert their influence again in the upward direction.

Referring again to the years 1949 - 1950, the increase in the wage rate can be considered "irreconcilable" with the existing price level because it failed to increase enough. In effect, it ensured further rounds of wage and price rises, to be added to by further rises in food costs during the great Korean price boom. In 1951, the retail price index increased by more than the impact of food costs plus the wage rate effect of 2:1. On this basis, the price index should have risen by about 7%; the difference, of course, would be due to imported commodity price increases. In 1952 the two indices are "reconcilable" as the food influence plus the wage influence equaled the increase in the price index. However,

a growing disparity between the indices is shown during the years 1953 - 1955, for the price index did not increase fast enough to accommodate the food and wages influence so that the foundation, if one is permitted a forecast, is being prepared for further increases in the retail price index.

Since wage increases generate their own price rises in the other components of the retail price index (including the manufacture of food products, of course, to a small extent,) when these are added to rising food prices, the effect will necessarily be an upward spiral. The effect is heightened by a time lag which coincides with a shortage of food, for example, which will add further to the retail price index. This will set the stage for more wage claims as Trade Unions act to defend their original real wage. The implication is that the original real wage is too high for the productive capacity of the nation to support. The living standard that workers attempt to maintain is not reconcilable with the productive ability of the nation to support it in addition to the current rising rate of food prices. The consequence is a dynamic process of rising food prices which will exert sufficient pressure on the cost of living index to call forth wage demands which, after an appropriate time lag, add their own pressure to the index. A perpetual upward spiral can result from sufficiently high food price increases and insufficient production to absorb wage costs if, by the time the wage increases are reflected in the index, food prices rise once again.

Since slightly over one half of Britain's food supply comes from abroad, the food index will reflect world prices as well as domestic. Domestic food production has been subsidized rather heavily in the past, but gradual reduction of subsidies has resulted

in a narrowing differential between farm prices and the retail price index for food.

(1938 = 100)

	1948	1949	1950	1951	1952	1953	1954 ✗
Farm prices	244	255	265	290	300	306	305
Food index	152	160	172	191	221	233	239
Percent. differential	60.5	59.0	54.0	52.0	36.0	31.5	27.5

✗ Farm price index is the average for January to June, 1954; Food index is the average for 1954.

Source: London and Cambridge Economic Bulletin, March, 1956.

Domestic farm prices compared with imports of Food, Drink and Tobacco.

(1948 = 100)

	1948	1949	1950	1951	1952	1953	1954	1955
Domestic	100	104.5	108.5	119	123	125.5	125	
Imports	100	101	112.5	127	135	129	135	137

Source: Annual Abstract of Statistics, 1955, Table 265 - Imports
London and Cambridge Economic Bulletin, March, 1956 - Domestic

Thus, reduction of food subsidies has resulted in the index of domestic food prices moving in closer harmony with food imports.

A strong case can, therefore, be made for the continuation of food subsidies until such time as the productive capacity of the nation is capable of absorbing the impact of increased wages. The subsidy would consist of shifting funds from one sector, or group of sectors, to another where they could be used to a better advantage. Agriculture, forestry and fishing account for 4.9% of the gross national product; therefore, a tax levied on the remaining industrial sectors to finance a subsidy would, in view of the lower retail price index which would result, be a wise investment. The influence of rising food prices should be no more than the contribution of the food production industry to

the national income. [2]

The present pricing and consumption pattern means, in effect, that the entire structure of wages and prices is more closely linked with the production of food than with any other industry. The caprice of nature is a major influence on food prices in the short term reflecting temporary scarcity. In the long term the response of agricultural production to increases in demand tends to be sluggish. A growing season is the minimum time lag required for increased food supplies to be forthcoming, and, in the meantime, prices, both foreign and domestic, can rise considerably. This tendency, of course, has inspired the "cobweb theorem" of current agricultural economics. [3]

The prospects for the future are also not conducive to stable or falling food prices. The greater marginal productivity of labour in urban industry has resulted in a shift of agricultural labour to the cities. This has resulted in a rising real national income, especially when prices of farm products and wages of farm labour were lower than industrial prices and wages. Currently, the shift of labour is continuing, attracted, no doubt, by the high wage earnings secured by organised labour. At any rate, until the balance of marginal productivity is reached, food prices must continue to rise for some time to come.

2. The manufacture of Food, Drink and Tobacco is weighted in the Index of Industrial Production at 97.54. The industry contributes, in other words, roughly 10% of the net output of industrial production. On this basis, the effect of Food on the Interim Index of Retail Prices is far too high and should be reduced by subsidy.

3. An excellent discussion of Agriculture and its problems by B.D. Giles is presented in the Oxford Studies in the Price Mechanism, Oxford, 1951, pages 173 - 203.

Subsidization of agriculture, having been an important feature of the war and post-war periods, succeeded in giving to labour a real income higher than would ordinarily have been obtained. During the period of physical rationing, the principle of general scarcity can be accepted. However, when the free market rationing by price returns, labour's real income falls as the prices of necessities rise. Being accustomed to a living standard on a par with other incomes, labour will refuse to accept an inferior position and will demand an increased share of distribution in order to protect its real wage. This must be an increased share because the productive capacity of the nation is incapable of sustaining the high level of real wages and the other demands made upon it by investment and the government. It is this refusal to accept a pre-war real wage during post-war full employment that is responsible for labour's defence of its income against rising prices.

The implication is that the transition from a controlled to a free economy has been too abrupt. It is the productive capacity of the nation which should be the determining factor in making the transition. The productive capacity which is still, fundamentally, pre-war, is not great enough to support post-war conceptions of the "just wage". In this sense, wages are irreconcilable with the ability to produce.

Maintenance of the current increase of the physical gross national product at the rate of about 3½% per year will, of course, result in stable prices in a reasonably short time if the demands of national defense and investment to sustain such an increase are not too great. Until such time is reached, it would appear advisable for the government in view of labour's defense of real income to take measures to stabilize the retail price index particularly those sections of the index that exert the most powerful influence.

Until the day arrives that productive capacity can sustain the living standard desired by labour, stable prices without some form of control will be virtually impossible. The situation can be visualised as a Marshallian system of supply and demand with a third determinant, the price of food and manufactured products. Since all three determine each other, equilibrium is impossible, for any influence such as the egg productive capacity of British hens can result in a rising spiral of prices and wages.

b. Influence of other wage gains.

Within the wage structure itself, the first, and most numerous, reason given for wage claims was that other workers in similar industries had received a rise in wage rates. This is, in effect, a defensive measure among individual Unions against the rising cost of living which would result from the wage gains of others. It constitutes a shift from a passive to an active income which is essential not only to the maintenance of real wages, but also to the prestige of Union leadership. The success or failure of a particular Trade Union will be determined by its ability to secure wage gains for its members; hence it is hardly to be expected of an individual union to note the gains made by other unions and accept them without similar action. Considerable psychological pressure, therefore, will be felt which will increase the speed of reaction of one union to the gains of another.

At any rate, this would account, to a large extent, for the great bursts of wage claims which have appeared at five-yearly intervals beginning in 1946. Since 1949, there has been a marked tendency for wages to move together showing the influence of one union upon another. The wage burst of 1951 accompanied the general rise in prices but was not sufficient to compensate for the rise in

retail prices which occurred at the time (see Table X and accompanying discussion). Ensuing wage demands were, therefore, restoring the original standard of living. The spiral action is, incidentally, apparent, and will continue if further rises in, particularly, food prices occur. The 1955 wage burst exceeded the cost of living index so that the standard of living of labourm presumably, was improving.

The existence of such a motive for wage demands implies the leadership principle. A particular Union in one industry will have such an influence over other unions that successful wage negotiation by that particular "leader" will serve as an example to others. As suggested above, unions tend to defend their workers against the price rises resulting from the wage gains of others. In other words, they become active. The loss in real wages by passive incomes can be analyzed by using the input-output coefficients calculated from Table 17 of National Income and Expenditure. The effect of a price rise resulting from a wage increase in one particular industrial sector on the cost of consumers' purchases can be estimated fairly accurately by tracing, first, a primary effect, and, second, a secondary effect on consumers' purchases. The primary effect would be the result of a wage rise in a particular industrial sector on the cost of consumers' purchases from that particular sector. The secondary effect on consumers would be the increase in cost of purchases from other industrial sectors because of the amount of the first industry's output entering into the production of other industries. The sum of these two effects would represent the total increase in cost of consumers' purchases resulting from a wage increase within one particular industrial sector. Assuming that no production increase occurs and that all other incomes are passive, a 10% increase in wages and profits will result in the following increase in consumer prices :

le XI

Effect of a hypothetical 10% increase in wages and profits on the cost of living, by industrial sectors.

Industrial Sector	10% Increase in Wages	10% Increase in Profits	Total Increase in Cost of Consumer Purchases
1. Other Production and Trade [4]	1.5	1.2	2.7%
2. Food, Drink and Tobacco	.6	.5	1.1%
3. Textiles, Leather and Clothing	.33	.3	.63%
4. Other Industries [5]	.4	.09	.49%
5. Agriculture, Forestry, and Fishing	.17	.2	.37%
6. Metals, Engineering, and Vehicles	.16	.08	.24%
7. Gas, Electricity, and Water	.13	.074	.204%
8. Other Manufacturing [6]	.125	.075	.195%
9. Building and Contracting	.14	.05	.19%
10. Mining and Quarrying	.07	.015	.085%
Total [7]	3.625	2.584	6.209%

As is shown, wage rises in the service industries have the greatest effect on cost of living. Wage increases among other sectors, however, have a very small effect. Roughly the same results were secured by the method of constant distributive shares (page 63) when no production increase was assumed.

4. Transport and Communication, distributive trades, insurance, banking and finance and other services.

5. Public adminsitration and defence, public health and educational services, ownership of dwellings, domestic services to households and services to private non-profit making bodies.

6. Other manufacturing now includes chemicals and allied trades as well as others. At the time the calculation was made, this breakdown was not included in the input-output table.

7. This "total" figure compares very favourably with Table 19 of National Income and Expenditure which gives the results of a complete solution of a matrix. Income from employment was 37% of consumers' expenditure which is the equivalent of the "total" figure. Profits, etc are 26.8%.

It can be seen that Basic Industries tend to be at the bottom of the list, even though the proportion of wages entering into production is high, because of the rather small proportion of their products directly consumed. Those producers of final products which enter directly into final consumption tend to be in the upper half of the list though the proportion of wages in production is low. Services are at the top because both characteristics apply - a high proportion of labour costs and of direct consumption.

It appears, therefore, that wage gains made among the basic idnustries will affect other workers less by reducing their real incomes through rising prices than by a psychological influence. Even higher rises designed to protect the share of profits will not materially affect the cost of living. Wage gains in consumer industries, however, such as Food, Drink and Tobacco, will have a marked effect on the level of prices. In these cases, the Unions may well take defensive action.

In the final analysis, however, the psychological effect seems to be much the stronger for it is the industrial "elite", "... the engineers, the miners, and the railwaymen which form the most important groups for wage negotiation."[8] Recently, opinion has been expressed that workers in nationalized industries may be the "leaders" in the movement for higher wages because of insufficient resistance to wage claims on the part of management.[9] As yet, however, evidence for this contention is not conclusive.

8. Financial Times, February 13, 1956.

9. H.J. Randall, Chairman of the London Electricity Board, suggested that former Trade Union leaders, now elevated to high positions in nationalized industry, are unable to reverse their former position. The Times, February 10, 1956.

c. Productivity and wages.

The third reason for wage increases, that of rising productivity, though not so often used as the first two, has, nevertheless, been important in some wage disputes involving large unions and employers' organizations which appeared before the Industrial Court for arbitration. [10] The point at issue here is to whom do the rewards of increased output per man belong, labour or management ? If new techniques of production, for example, result in lower costs per unit, the distributive share of profits will increase if wages are constant. Should labour's income rise at the same rate as output per man-hour, the distributive share of labour and profits will be the same as before. However, with constant distributive shares, increased output per man-hour will result in higher absolute profits by virtue of the larger quantity of production. If, for instance, both productivity (here used as synonymous with output per man-hour) and wages should increase by 10%, the shares of wages and profits would remain constant, but both profits and labour would increase absolutely by 10%. Now the question, which must ultimately be decided, is - if the increased productivity is due entirely to an innovation introduced by the employer, is this 10% profit increase large enough to compensate him for the expense of the innovation ? Furthermore, this profits increase must be net of tax; otherwise it will be to the employer's advantage to increase prices and thereby raise his distributive share. This aspect of the question will be discussed at greater length in the next chapter; for the moment, the labour side of the problem will receive attention.

10. The Confederation of Shipbuilding and Engineering Unions, in 1953, based a wage increase on 1. the rise in the cost of living, 2. productivity increases, 3. a large increase in profits. Court of Inquiry Report, Cmd. 9084.

Generally speaking, the following relationships will summarize the position of labour and profits in distribution, and the effect of production.

A. Constant Prices.

1. Imports cost rising - shares of labour plus profits falling at the same rate as the rise in the share of imports.
2. Imports cost falling - shares of labour plus profits rising equal to the fall in the share of imports.
3. Production increase equal to the wage cost increase - distributive shares of labour and profits constant.
4. Production increasing faster than wage cost - labour's share falling, profits' share rising.
5. Production constant or falling, or rising less than wage cost - labour's share rising, profits falling.

B. Rising Prices.

1. Imports cost rising - share of labour, or profits, or both, constant, or falling less than the rise in the share of imports.
2. Imports cost falling - share of labour plus profits rising more than the fall in the share of imports.
3. Production falling or constant, or rising less than the wage cost increase - share of labour rising and profits share constant or rising.
4. Profits share rising - wages cost constant or rising less than or the same as production.

Reference to Table IX, page 75, will show that the period from 1948 - 1950 was characteristic of A1 and A3. Prices were relatively constant, imports were rising, and the shares of labour and profits were falling. For 1950 - 1951, B1 and B 3 apply, for prices rose

considerably and the share of labour fell. 1951 - 1954 was typical of B2 and B3. The net effect will depend on which influence is the stronger, imports or production, and will be apparent from the tables.

The implication in this argument for higher wages is that condition B3 exists, for production is rising less than wage costs and the share of wages is rising less than the share of profits. Apparently, Trade Unions feel that labour should have a larger share, and express the desire by suggesting that the benefits of increasing productivity should accrue to labour. On a national scale, of course, these benefits do not exist, but in individual industries, the possibility should not be overlooked.

The situation is best expressed by the London and Cambridge measurement of the "real product" for the United Kingdom. With 1948 as 100, the average for 1955 is 125.3 [11] Wage rates, however, have only equalled the rise in retail prices since June, 1947 when both indices were based on 100. "This may be a disappointment to the worker who may well wonder where the extra output is going and not be fully satisfied by the explanation that earnings in industry have risen 10% more than wage rates (since 1948) ... " [12] This, of course, exaggerates the position, for wage rates have increased 3% more than retail prices since 1948, the period of a 25% increase in production. To eliminate the 7% increase in employment from 1948 - 1955, output per man should be compared with earnings, and out-put per man-hour with wage rates. A more accurate picture emerges.

11. This was calculated with a weighting system devised by L.C.E.S. and published in London and Cambridge Economic Bulletin, No. 17, page V1.

12. R.G.D. Allen and H.S. Booker, "Prices and Wages", ibid., page V11.

	1948	1955	
Wage Rates	100	145.5	- December
Output per man hour in manufacturing	100	116.8	
Wage earnings	100	155.5	- October
Output per man in industry	100	123	(Economic Survey of 1956, CMD.9728)
Price level for manufacturing (Table VII)	100	119.5	
Index of Retail Prices	100	142.5	

The high retail price index is due to the "external" influence of food prices and bears no relation to the wage-price structure of manufacturing. The extra output can be found in the difference between the price level of manufactured products and the retail price level, for, had it not been for the extra output, prices would have risen much more. Therefore, it may be difficult to explain to the Trade Union that though the workers' real wage rate has improved slightly over the past seven years and production is 25% higher, to demand higher wages commensurate with higher productivity is a mistake. To do so would require a demonstration that costs of imports and food had risen and that these are major determinants of retail prices. It would also be necessary to show that labour's share of the final product was too large for the productive capacity in the first place so that what economies of production that may occur through rising productivity are already "swallowed up". Without these economies, the standard of living would be much lower than it is.

The difference appears to be that labour's share of the gross national product may already be larger than the productive capacity of the nation can support. If this is true, further demands on productivity will only maintain the position and result in a "squeeze of profits" and higher prices. The fact that labour's share of the gross national product falls as output per man rises does

not constitute falling real wages. Under the present circumstances, this is the only way that prices can be stabilized. Under pre-war conditions, a higher share for labour may have been only fair and could be pursued as an ideal by the Trade Union Movement. Currently, however, the situation would call for wage increases which are less than production increases regardless of the index of retail prices.

Ultimately, this is the only valid criterion for wage increases, and the problem of a wages-prices spiral would cease to exist if it were adhered to. It is the fact that wage demands bear no relation to production that causes rising prices. Indeed, wage claims are often make at a time when an industry's production is low, and, consequently, the industry is unable to pay higher wages.

d. Preservation of Differentials

The fourth argument, that of differentials, applies particularly to craft unions which are desirous of protecting the traditional wages of their members. Generally, this involves a certain degree of scarcity value protected by apprenticeship regulations or other forms of limitation, and a belief that higher grades of skill or training ought to be rewarded.

Flat-rate increases of wages since the war have narrowed existing differentials so that craftsmen in many cases consider themselves underpaid. This had resulted in a number of wage demands made by Craft unions, typical of which is the Printers Union, based on a percentage increase rather than flat rate.[13] Longstanding traditional agreements become the basis for wage demands rather than a shortage of labour as was urged by the White Paper on Personal Incomes. These traditional agreements, temporarily set aside during wartime, again appear as a means of protecting differentials of skill. In effect, the many wage gains of the Industrial Union

13. Court of Inquiry Report, Cmd. 8607

tend to reverberate throughout the entire wage structure of labour, and upper level incomes, hitherto passive, become active. The process will be repeated when the wage gains of industrial unions press again on the differentials of the crafts.

Furthermore, there seems to be a tendency among hitherto unskilled workers to achieve the rank and pay of the skilled. Comparisons of the type of work done with other higher skills so as to convince the Industrial Court of the higher quality of work performed and to merit an increase in wages which would be the equivalent of the higher skill are often made by certain Unions . The effect of this tendency would be a narrowing of differentials contrary to the Craft Union which would increase them. This attempt at reclassification can be a serious source of difficulty for the employer, for since no agreed wage structure exists among unions within a particular industry, continuous "leap-frogging" of wage claims may result. [14]

Monopoly of supply is often resorted to as a means of defending differentials. The situation is similar to business monopoly in that security is the principal motive. By restricting membership into the craft, a union can protect the standard of living of its existing members more effectively. This, of course, enhances its bargaining power vis-a-vis the employer,

Arguments 5 and 6, very infrequently used, and, for the fifth, rather unique, are hardly worth detailed consideration. Number 5 suggests that the Trade Union concerned would benefit from an attempt on the part of the employer to attract labour to the industry,

14. Court of Inquiry Reports, Cmd. 8154 and Cmd. 8074.

which is exactly what the White Paper of 1948 suggested. However, the low mobility of labour during full employment ensures that such a method of attracting labour will be ineffective and the existing workers only will benefit. Number 6 is purely a technical consideration to be arranged between the Trade Union concerned and the employer and, doubtless, an agreement can be easily reached. At any rate, the sliding scale is not an important factor in the wages-prices structure because of the rather small numbers of cases in existence. Should such a practice become widespread, it would contribute to deflation as well as inflation, for a fall in the retail price index would automatically reduce wages. The chances of this, however, are remote since the general tendency of world prices is upward, and the sliding scale would increase the speed of the spiral of wages and prices. At the moment the existing sliding scale agreements are not important since so few workers are affected.

e. The drive for security of Wages.

Of the six arguments put forth by Trade Unions numbers 1 and 4 act from within, and numbers 2 and 3 from outside the wages structure. Internally, two forces will be at work, one to establish a common wage level and the other to increase the differentials between skills. The large industrial union will attempt to raise the income of its members and in so doing enhance its bargaining power by incorporating within its ranks the smaller craft union. The craft union, on the other hand, will attempt to maintain or increase its differentials and protect its prestige and the living standards of its skilled membership. This fundamental opposition of the general versus the particular creates considerable tension within the wages structure itself. A single wage claim won by a Trade Union which is in a

strategic position of leadership can, because of these tensions, set off a chain of wage reactions which will extend horizontally throughout the industrial unions and upward through the higher skilled craft unions.

Outside the wages structure, the most important argument is, of course, the cost of living. Maintenance or improvement of real wages is probably the major drive among workers, and the Trade Union has organized this drive to such an extent that it cannot be overlooked by the employer or the government. It is this that ultimately divorces the wages the employer must pay from his own cost structure and, since the determinants of the cost of living are, to a great extent, outside the influence of manufacturing costs, the employer must adjust his own prices accordingly.

The ability to pay argument, based on productivity within the industry, suggests that labour is attempting to gain the results of improved technology without assuming any of the risk involved in investment. While this is, perhaps, the only really sound basis for increased wages (no wages-prices spiral could occur if all unions adhered to this one principle for wage claims), under the present circumstances it probably entails a reduction of the share of profits below the necessary minimum for production. When the only basis for such a claim is that " ... new techniques depend on the wholehearted co-operation of the workers" [15] it is hardly conceivable that this constitutes assumption of risk.

Throughout all six arguments for higher wages there is in evidence one important fundamental drive - for security. Labour's memories are long, and there is no desire to return to the old

15. Cmd. 9084

atomistic methods of wage determination. It is for this reason that the Trade Unions were originally formed and there is no reason to expect that they will relinquish their positions.[16] Rising prices and inflation enhance the uncertainties of economic life to a degree dependent on the speed of rising prices; therefore, in the absence of other "security measures" such as governmental measures to control prices, labour seeks its own solution and demands a wage rate which is equal to cost of living increases.

Further, the fact that wage rates by no means represent wage costs and that it is profitable to increase production by incentive and overtime payments means that labour's share of distribution is high and rising with the result that labour gains in real income at the expense of other passive incomes. It is in this way that a redistribution of real income in favour of labour and profits occurs. There is no conscious, deliberate attempt on the part of Trade Unions to increase labour's share of income; this is purely incidental to the drive for security. The wage bargain itself is concerned with wage rates and the incentive payments are an individual matter to be decided between the worker and his employer.

It is labour's desire for security that creates the tensions within the wage structure itself. In so far as prices rise due to wage gains in isolated industries, workers will again act to secure their real income. The psychological influence speeds up the

16. "For over twenty-five years the firm of D.C. Thompson have denied their employees the right to belong to a trade union and have thereby perpetuated a practice which went out in Great Britain with the abolition of Feudalism. Seventy nine have been dismissed as a result of this strike in defence of the elementary right of the worker to belong to his trade union".- Resolution passed by the Scottish Trade Union Congress concerning the dispute between D.C. Thompson, Ltd. and the Trade Union concerned. Court of Inquiry Report, Cmd. 8607.

reaction and probably accounts for the rounds of wage demands which occur at intervals. For the craft unions that rely on monopoly power to maintain differentials, it is again the desire to secure the standard of living which tradition has decreed that results in the vertical tension.

Perhaps no change in economic institutions has been so complete and far-reaching as that of the determination of wages. The entire economic system is based on a Labour Standard of value so that the level of wages determines the level of prices. This change was noted by J.R. Hicks in a recent article in which he stated that wage structures have become insulated from economic laws and pressures.[17] The level of subsistence is now the major determinant of wages. In the past, a fixed money supply determined the level of employment and wages, whereas now the supply of money, the rate of production, and other incomes must adjust themselves to an equilibrium level of wages. What this wage level will be depends upon a bargain reached by trade unions and employers' organisations and holds for an entire industry. The individual entrepreneur must adjust his costs to this wage level before he can decide even the profitability of production.

This revolutionary change in the method of determining wages is not at all regrettable. Since the wage earners represent the majority, it is far better to tie the economic system to human values and need rather than to the supply of gold. It represents, in fact, a guarantee of a measure of security to the worker which he had never enjoyed before. However, this "new economy" will have an inflationary bias since labour will resist wage cuts, and as external stimuli will react on the cost of living and lead to higher

17. J.R. Hicks, "Economic Foundations of Wage Policy", Economic Journal, Vol. LXV: September, 1955, page 389.

wage demands the danger of rising prices will be ever present.

Therefore, new measures to check inflation will have to be applied which hitherto have not been necessary. Such measures must attack inflation from within the structure of wages and prices and would consist of control of the retail price level and the encouragement of productivity. Sources of revenue other than a tax which raises the level of prices must be found. The present purchase tax is only effective in checking demand during a wage freeze policy which discourages a compensatory rise in the wage level. Such new measures would give greater freedon to both unions and management to conduct the bargaining process to their mutual advantage whereas, at present, the employer is forced into a wage-cost structure which can only be accommodated by a high price for his product.

Under the "new economic system" traditional differentials must be adjusted so as to reflect not only higher values of skills but also the relative scarcity. Restrictive practices designed to enhance the scarcity value of certain skills are, of course, to be discouraged and in this sense the older craft unions may find themselves in a state of decline. In this way, the differential will serve an economic purpose instead of creating upward tensions within the national wage structure.

In the final anlysis, the fact that labour, as a result of war and post-war demand, has succeeded in gaining a larger share of distribution than the productive capacity can support must be overcome not by reducing the share of labour, but by increasing productive capacity. This can only be done by encouraging investment in new and more productive methods.

CHAPTER 7

INDUSTRIAL POLICY OF MANAGEMENT

The second active sector, gross profits, forms the subject of this chapter and will be treated in similar fashion to the employment sector. The same schematic system applies in that profits can increase its distributive share, just as employment income, through rising prices. There is an essential difference, however, between profits and wages which should be emphasized at the outset. In the ratio $o = \frac{O}{PQ}$, absolute profits, o, may decline, but if the product of price and quantity falls faster than O, the ratio o will rise. Hence the entrepreneur may be in serious trouble from declining profits, yet his profits' share may rise. Profits, of course, are dependent upon sales so that Q will represent sales rather than production. Essentially there is little difference between the two except for the risk involved in declining demand.

Labour, as has been shown, will resist attempts to reduce employment income, E, so that with declining sales, $(\frac{E}{PQ} = e)$, the ratio e will rise. In addition, the only way for labour to increase its absolute income, E, is either by increasing its distributive share or by rises in E which are proportionate to PQ. These will involve changes in the wages bargain. Profits, however, being residual income, can increase automatically by rises in Q with no change in share, o. An increase in price, P, must result in an increase in o because O, absolute profits, must increase faster than the PQ, assuming that other components of cost are constant. Thus, the difference between profits and income from employment rests purely in the residual nature of profits which may rise or fall depending on the state of market demand.

As with labour, a price increase must either result in an increase in the share of profits or compensate for an increase in another active income within the process of production, (see relations B3 and B4, page 91).

Table IX, page 75 , shows this rise in the share of profits of final output in 1952 when absolute profits were falling. This could only be accomplished by rising prices since production and sales were particularly low that year. The opposite was true in 1951 when absolute profits were considerably high, yet the share of profits was quite low.

In effect, since the entrepreneur is primarily interested in absolute profits, he will only increase his share and prices if the pressure of costs forces him to do so. Clearly, it would be to his advantage to maintain constant prices in the face of competition both domestic and foreign if production and sales (Q) could increase sufficiently to maintain the level of profits he considers adequate. On the other hand, he may find it easier simplyto raise prices in order to protect or increase his share rather than to take the necessary measures (generally involving investment of capital) to increase production and sales. These are the two alternatives which face the entrepreneur when production costs are rising. Both involve a certain amount of risk; in the one case, possible loss of markets to competitors, and in the other, the use of capital which may or may not be fruitful. Which alternative is selected, of course, is the all-important question.

The residual nature of profits is the reason for the wide fluctuation in the distributive share. While the share of labour has been steadily increasing from 1951 - 1955, owing to wage demands which exceed production, the profits' share has increased by leaps as rising prices and falling imports costs reduced the share of imports.

In the last analysis, labour's gains are practically risk-free, for it cannot fail to maintain or improve its real wages through increasing its share, the only possible risk being unemployment. Profits, however, may lose more in sales than it gains through higher prices so that, as in 1952, the share may rise though absolute profits fall. To compensate for possible losses in sales, however, absolute profits may increase considerably if both sales and price increase. This, of course, constitutes the reward of the entrepreneur's successful "gamble".

a. Composition of profits.

Probably the best approach to the analysis would be first to establish the nature of profits. In a stationary state and with perfect competition, after all marginal products are equated with marginal revenue, profits, as a residual, would cease to exist. The price of a product would be equivalent to cost of production which includes the wages of management or entrepreneurship. The special talent of planning and foresight would be rewarded in the same way as other productive factors and no surplus could accrue.[1] However, once these rigid, theoretical assumptions are relaxed, and an element of change through time is introduced, a surplus will emerge which cannot be attributed to any one productive factor. This surplus, of course, constitutes profit.

When the element of risk or uncertainty is included, the surplus of profit becomes the reward for successful forecasting of market demand. Thus, new techniques of production will only be introduced if a surplus is foreseen which will compensate the entrepreneur for the expense involved. This surplus may well become negative if the

1. For a development of this concept at great length, see F.H. Knight, Risk, Uncertainty, and Profit, Houghton, Mifflin, & Co. Boston, 1921, Chapter X.

market demand changes, or the surplus may be smaller than was anticipated with the result that the entrepreneur is forced to accept a loss on his investment. Under dynamic conditions, with perfect competition, the new technique of production would receive its reward as a factor of production according to its contribution. However, it would only be introduced into the production process if marginal revenue were greater than marginal product, a temporary condition under perfect competition which could only arise from an increase in demand.

It follows, then, that profits, a surplus which is not attributable to any factor of production, can only exist in the dynamic real world, and is the reward for risk bearing which is as essential for the production process as any other productive factor. This surplus may be greater under conditions of less than perfect competition than under perfect competition, the differential arising from an excess of demand forseen or unforeseen. In such a case, the reward for risk bearing may be exceptionally large so that the degree of risk becomes quite small.

Generally, the degree of risk will vary inversely with the degree of assuredness of reward. Also, the amount of the reward will be a function of the degree of risk. The greater the risk, the greater must be the expected reward. This function will probably be an increasing one in that the expected reward will increase at a greater rate than the risk. Thus, an entrepreneur may be content with a small degree of risk and an assured reward rather than a high degree of risk and an even higher reward that is not at all assured. This, of course, follows from the definition of risk.

With the exception of the individual whose gambling instincts are strong, it would be to the advantage of the entrepreneur to reduce the degree of risk as much as possible in so far as it is within his power to do so. If he can enjoy a large reward from a small risk,

it would clearly be to his advantage. However, should the reward be so large that it encourages competition from other entrepreneurs, the degree of risk will rise again. In general, therefore, the entrepreneur will be content with a moderate reward for a small risk unless, of course, he is a gambler. The advantage of reducing risk has proved so great that considerable money is spent on advertising to encourage the differentiation in the minds of the consumer between one product and another. It is obvious, therefore, that most entrepreneurs will generally be content with the lower, safe rewards rather than gamble on large profits with high risk.

This leads directly to the first cource of a surplus or profit which accrues from the reduction of risk - profits of security. Under perfect competition where the risk element is at its greatest, these profits would be nil. If an entrepreneur were to set a price high enough to accrue a surplus over the competitive price, he would, of course, lose his sales. The element of risk, in other words, is at its greatest under perfect competition. Profits of security arise when the entrepreneur either by accurate forecasting of market demand, by product differentiation, or by any agreement designed to reduce competition, secures a price higher than that under conditions of perfect competition. [2]

Since the perfectly competitive world does not exist, it follows that profits of security exist to some degree in all production. In many cases, these profits will be necessary to production, especially,

2. M. Kalecki has shown that prices and profits will be determined by the "degree of monopoly". This follows from his assumptions of 1. a given capital equipment, and 2. operation below capacity. His use of the term "monopoly" is equivalent to "security" above. Theory of Economic Dynamics, Allen & Unwin, Ltd., London, 1954, Chapter 1.

if high capital outlay is required. A price that would not allow profits of security may be "uneconomic" in the sense that the risk is too great for the capital outlay required. Public services, for example, such as electricity, transport, etc., will require enormous capital expenditure; hence, they can only be undertaken if the degree of risk is sufficiently reduced. Generally, the greater the degree of competition, the greater the risk.

The second source of profit, termed profits of innovations, can arise under perfectly competitive conditions. If, by introducing a new and more efficient technique of production, costs can be reduced, the differential between costs and price can be widened. This increase, if it accrues to profits, would increase the profit margin. Perfect competition implies that prices will not rise above the level set by demand which is perfectly elastic. Profit increases from innovations must, therefore, arise by lowering costs. To relax again the assumption of perfect competition, total profits will consist both of profits of innovations and profits of security. One will act to lower costs, the other to increase prices above the perfectly competitive level.

Another way of expressing innovations would be by an alteration in the coefficients which constitute the input-output table. An innovation which would, for example, reduce labour costs would be shown in the table as an increase in the amount purchased by the "innovating" industry from the producer of the innovation and a decrease in the amount purchased from employment. This would alter all coefficients, of course, so that an entirely new table would, theoretically, be created. Security profits, however, would not change the coefficients except for the "gross profits etc" sector. Further, it is the profits of innovations which become the target of Trade Union bargaining as wage demands are based on productivity increases (see agument 3, page 78).

If such were the case, the other major source of profits, security, would be the only revenue left to the entrepreneur to compensate for the risk.

A third source of profit lies in windfalls. These arise from a rise in prices of existing stocks and are most prominent during inflation. As inflation progresses, windfalls become more important as a source of profit, particularly for traders. Also, control of inflation by monetary means becomes more difficult, for the interest rate would have to be high enough to discourage traders from holding stocks in anticipation of a rise in prices. In an advanced stage of inflation, this would probably be an impossibility, but in earlier stages the rate of interest would have to be high enough to make the difference between the rate and the anticipated price rise too small to compensate the trader for the risk involved.

Similar to windfalls would be the anticipated profit increase resulting from an increase in volume of turnover. A trader may, for example, anticipate a seasonal increase in demand and increase his stocks accordingly. Since this involves no windfall profits (due to a price increase) a rise in the rate of interest could have much more effect in discouraging the trader. Again the differential between the cost of borrowed money and the expected increase in demand will determine the profitability of his venture, and should this prove too small for the amount of risk, the trader will be discouraged.

Doubtless, if it were possible to examine all profits, they would be found to consist of all three sources. Some, however, would rely on one source more than others. Highly competitive industries would rely larfely on the profits of innovations, while others would find security profits their major source of revenue and may deliberately restrict supply, and, hence, forego profits of innovations if security profits are more lucrative.

Furthermore, industries would rely more heavily on a particular source as changes in the economic environment take place. Windfalls would become more prominent during the upswing of the trade cycle, whereas security profits would be more important during the downswing. Labour saving innovations would depend largely on the availability of cheap labour, and could only be successful if they were more profitable than the labour displaced. In the long run, however, innovations will take the form of a steady stream of new techniques which are the result of planned research. The more prosperous industries, therefore, will be in the most favourable position to secure profits of innovations.

During a period of inflation which is characterized by rising costs of imports, windfalls may be an important source of profits. Stock appreciation was particularly great during the Korean price boom. However, raw materials purchased for manufacturing purposes must be replaced at a higher price, and, since commodity prices increased faster than the prices of manufactured products, windfalls for the manufacturer must have become negative during this period. As commodity prices fell after the 1951 high point, the opportunity for windfalls would again return, but since they did not fall to their original pre-Korean level, the net result over the entire period would be negative. This would result in the burden of profits resting on the other two sources. In other words, the element of risk was heightened by the enormous fluctuations in world commodity prices. [3]

Innovations can increase absolute profits by lowering costs per unit, and under perfectly competitive conditions will be the only source of profit. Profits of innovations, in addition, are anti-inflationary, since no price rise is involved; hence, in the face of rising wages and

3. For an excellent analysis of the effects of fluctuating prices on profits, see F.W. Paish, Business Finance, Pitman & Sons, London, 1953, pages 66 - 89

raw material costs, it would seem to be an ideal source of profits. The individual entrepreneur, however, may be faced with rising costs of capital equipment as the following indices suggest .

Year	Industrial Materials and Manufactures. June 1949 = 100	Manufactured Products (other than Food, Drink, and Tobacco. June 1949 = 100
1950	115	106.8
1951	146	124.8
1952	142	127.8
1953	136	125.2
1954	137	125.6

Source : Board of Trade.

The risk, therefore, of innovations will grow as their cost rise in relation to the expected competitive price for the entrepreneur's product. In order for the innovation to be worthwhile, it must increase the quantity of production sufficiently to pay for itself and yield a return over the anticipated life. If its expected return in the form of increased quantity of production is constant, the rising cost will narrow the differential between the cost and expected return, making the compensation for risk smaller. This, of course, represents the "ceiling" as expressed by Hicks, "of the relative shortage of investment goods so that prices of investment goods are tending to rise even while those of consumption goods remain fairly steady." [4]

This tendency is clearly shown in Table XI, page 88 . In this list, arranged in order of effect on consumer prices, the capital producing industries are concentrated in the bottom half (Metals, Engineering and Vehicles, down to Mining and Quarrying). An overall increase in wages and/or an increase in raw material prices will result in a higher percentage rise in capital goods than in consumer goods, since both labour and raw materials form a larger portion of input

4. J.R. Hicks, A Contribution to the Theory of the Trade Cycle, Oxford, 1950, page 134.

in the capital producing industries than in consumer goods producing industries. However, the more "basic" the industry, the less the effect on consumer prices. It follows, therefore, that during an inflationary period, capital costs must rise faster than consumer prices. This explanation avoids the necessity of explaining rising Capital costs in terms of increases in demand (via the accelerator) and only requires the simple premise that the value of goods represents the cost of labour and materials which go into them plus a margin for profits.

The entrepreneur, therefore, will be less prone to "innovate" during an inflationary period than he will be when costs of capital expenditure are low such as during a depression. Innovations will be especially profitable if he anticipates rising prices as the recovery phase of a business cycle approaches.

The only major source of profits left, therefore, is the profits of security which, in effect, will mean the maintenance or increase of the distributive share. Since both raw materials and capital costs have been rising, windfalls and innovations as a source of profits will tend to be minor. The only possibility of innovations being profitable will be when the costs of labour rise to such an extent that the entrepreneur is forced to introduce labour saving techniques to defend his profits' share. This will occur when competition sets a limit to his prices. At that point, not only his own labour costs will be high but also the costs of labour in the capital producing industries so that profits will be genuinely "squeezed". In addition, if labour insists upon rising wages as productivity rises, the entrepreneur will be unable to improve his share in this fashion, and, consequently, must cease production entirely. This stage, fortunately, has not yet been reached.

In effect, the risks of production become considerably greater during a wage-cost inflation. Kalecki's basic assumptions (footnote 2

above) are satisfied by the fact that capital equipment tends to become too expensive for the application of innovations, and the existing capital equipment is operating below capacity because of the shortage of labour during full employment. In order for innovations to be introduced, risk must be compensated for by security profits which will only arise through increased prices. This, of course, is made quite simple for the entrepreneur because of the inflated demand, but for those producers for the export market, it becomes increasingly difficult in the face of foreign competition.

Ultimately, therefore, security profits become the prime requisite for the production process during inflation, for the profits of innovations which will result from an expansion of quantity of production cannot be realised until the risk element is overcome by security profits. To refer again to Table IX, page 75 , the share of profits in final output has been increased from 1948 to 1954 by 10%, a result which should occasion no surprise.

b. Market demand and security profits.

If the conclusion be accepted that security profits form the ultimate source of revenue for the producer during inflation, it logically follows that the state of demand must be such that the market will accept the price rises which just occur. Although demand itself is treated in Part II, it will be advantageous to establish schematically the conditions while on the subject of security profits.

If the elasticity of response of price to wage cost increases is equal to unity, $\frac{dP.E}{dE.P} = 1$, an industry will be using prices increases to pay for the entire increase in wage costs with no loss of income shares to any factor of production. Should the elasticity be less than one, part of the wage cost increase will be paid for by a reduction

in the share of one or more factors. (The assumption is made for the moment that no profits of innovations are available). This attempt to recoup wage increases by price increases can only be successful if the price increase calls forth the same percentage increase in value of demand, that is, $\frac{dD.P}{dP\ D}$ also equals unity. Thus the condition $\frac{dP.E}{dW\ P}$ equals $\frac{dD.P}{dP\ D}$ equals unity is essential for complete security. However, should $\frac{dP.E}{dE.P}$ equals $\frac{dD.P}{dP\ D}$ equals less than unity, an industry would be forced to seek other means of restoring the share of profits, in the form ofinnovations or closing down inefficient firms, etc., for the risk of production will probably become too great for the industry. Of course, if the industry were already enjoying high profit margins it might accept the cut and continue production.

Now if the ratios are equal to unity, the entrepreneur may be encouraged to invest in innovations because the gains made from them will accrue entirely to profits His profit shares are secure and any attempt on the part of labour to reduce them will be fruitless. Labour's gains would be made at the expense of other passive incomes including labour in other industries. The evidence suggests that such a condition may be general in post-war Britain.

On the other hand, if the ratios are less than unity, wage gains can be made at the expense of profits' share. The entrepreneur, in this case, will be forced either to invest in innovations or accept the loss of proifts. If this condition were general, a wages-prices spiral would quickly converge, for prices could not react sufficiently to maintain the movement. In the former case, the spiral would continue, for the reaction of prices would be sufficient to call forth further increases in wage rates, the only converging force being passive incomes. Innovations, of course, would bring the spiral to convergence as

absolute profits increase while the share declines.

In both cases, innovations which yield the quickest return would be the most beneficial, but with industries facing competition they would be essential. The risk would be considerable if long term capital expenditures were attempted, but for those industries whose security profits are guaranteed, the risk would be quite small. These industries will be guaranteed the extra profits of long term innovations, whereas the competing industries will probably find that the surplus profits due to long-term innovations will already be threatened by rising wages.

The problem, therefore, facing industry is largely one of security. The risks of entrepreneurship, since they are higher during periods of rising costs than when costs are stable, must receive compensation, and if market demand can be increased by product differentiation or by any other method of reducing competition, it will be to the advantage of the entrepreneur. Further, this compensation for risk must be net of tax so that if taxation of profits tends to be high, the entrepreneur will set a higher price to ensure an adequate measure of security profits.

c. Risk-free methods of increasing profits - overtime and incentive payments.

Competitive industries will attempt to reduce risk as much as possible during a production process. Profits of innovations, while forming the major part of gross profits, will involve greater risk the longer the fruition period of investment. The shorter the fruition period, the less the risk. Should prices rise during the fruition period, the entrepreneur will gain windfall profits, and, of course, should prices fall, he will lose some of his anticipated profits of innovation. Since the accuracy of forecasting market demand

becomes less the longer the intervening period, the entrepreneur will choose that method of production which ensures the greatest profit within the forseeable price period. During inflation, rising prices can be forseen in the immediate future, but no one can be sure that the inflation will continue over longer periods especially if anti-inflationary measures by the government are expected or already in force.

The most "risk-free" method of increasing production in the face of rising demand is either by expanding the labour force or by increasing the number of hours worked. In the event of a failure of demand, the entrepreneur simply has to decrease the number of hours worked; hence no redundancy of capital equipment need occur. This is especially attractive in view of rising costs of capital investment which increase his potential loss. For those industries with a sufficient portion of security profits, part of the increased labour costs due to longer hours can be regained from higher prices. Thus, overtime with a more intensive use of existing capital equipment constitutes the simplest and most risk-free method of increasing production.

However, this may not be the most effective method, in the sense of producing results, as the following analysis suggests. Let W = wage rates and E = earnings, then $\frac{dE.W}{E\ dW}$ will be the degree of "incentive payment" going to labour. Incentive payments consist of overtime and bonus schemes, etc, designed to increase production. There must be a functional relationship of some kind between production increases either real or nominal, and incentive payments; otherwise, the entrepreneur will find it too costly a proposition. Let Y_1 = nominal production, and Y_2 real production, then $\frac{dY2}{Y2} = f(\frac{dE.W}{E\ dW})$. Furthermore, should the increase in wage rates equal

the increase in earnings, $\frac{dW}{W} \cdot \frac{dE}{E}$, no increase in production will take place, for the workers will be content with the existing page payments. Also, of course, the function $\frac{dY2}{Y2} = f\left(\frac{dE.W}{E\ dw}\right)$ must be decreasing as incentive payments increase, for physical limits of fatigue, etc. to labour's extra output will come into effect . When these relationships are compared with increases in output per man-year and investment in plant and machinery, it is possible to estimate their relative importance.

Table XII

Influence of Incentive Payments and Investment on Production

Years	1 $\frac{dE.W}{E\ dW}$	2 $\frac{dY2}{Y2}$	3 ⊠ $\frac{dY2}{Y2}$	4 $\frac{dY1}{Y1}$	5 Increase in Investment in Plant and Machinery	6 Increase in Output per man-year.
1947-48	2.22	.047	.08	.09	.24	
1948-49	3.92	.044	.065	.07	.08	.05
1949-50	1.61	.04	.075	.04	.09	.05
1950-51	1.2	.028	.03	.11	.05	.01
1951-52	.95	-.01	-.03	.095	-.07	-.02
1952-53	1.185	.048	.06	.06	.05	.045
1953-54	1.48	.045	.08	.063	.03	.05
1954-55	1.1	.035	.04	.055	.134	.025
Average	1.7	.035	.05	.07	.0755	.03

⊠ - Weighted index of Industrial Production.

Source: Column 1 - Ministry of Labour Gazette.
Column 2 - National Income and Expenditure,1955, Table 13
Column 3 - Annual Abstract of Statistica, 1955, Table 146, Figure for 1954-55 is taken from the Economic Survey,1956 Cmd. 9728.
Column 4 - National Income and Expenditure, 1955, Table 1. Figure for 1954-55 is taken from Cmd. 9729,
Column 5 - National Income and Expenditure, 1955, Table 51.
Column 6 - Figure for 1954-55 is taken from the Economic Survey, 1956, Cmd. 9728.
Column 6 - Cmd. 9728, Table 9.

On an average, incentive payments have been increasing 70% faster than wage rates. Since with a ratio of unity, no incentive would be offered, this figure of 1.7 seems considerable. In view of the small increase in output per man-year, the "risk free" investments in

overtime and incentive payments is hardly productive. It would appear, in view of the increase of the real national product over the years, that incentive payments greater than about 1.5 are fruitless. Below this level, there seems to be a drop in the rate of increase of real output.

Investment in productive equipment shows less of a relationship with real output and output per man-year. It is particularly difficult to arrive at any kind of conclusion here because of the lack of knowledge regarding depreciation and investment for replacement purposes. However, there may be an increasing reliance on investment and less on incentive payments since, in 1955, investment was much greater than before. Also, of course, a lag will exist between the moment of investment and the time that results appear in industrial production.

Any conclusion must be tentative since sufficient information is lacking.[6] However, it seems that the policy of attracting labour into an industry by offering overtime working is not rewarding if the payments exceed a certain level. Such a policy will only succeed in increasing the distributive share of labour and the price of the product, as is shown by the rising level of real earnings as compared with wage rates.

Year	Average Real Wage Rates	Average Real Earnings
1938	100	100
1948	101	114
1949	101	116
1950	99	116
1951	99	116
1952	99	115
1953	100	117
1954	103	121

From an article by Professor Pigou in The Times, July 13, 1955. Data computed from a series of linkages by the L.C.E.S.

6. The analysis would be far more accurate if it could be done on an industry basis. Wage rates for industry groups, unfortunately, are not available.

It has been shown that profits are a residual essential to production. The provision of capital is, of course, as necessary a function of production as labour and requires payment. Were it possible for wage costs to be gained at the expense of profit margins until the amount remaining to the profits sector was negligible, the problem of the wages-prices spiral need never arise. From profits, however, must be met traditional payments for the use of capital which takes the form of annual dividends. These are as essential as the payments to labour for its services, and, indeed, in view of the many small savers who invest in insurance, etc. have as much an ethical right to earnings as does labour. Just as labour is guaranteed a minimum subsistence for its services, capital, on the same grounds, should be treated likewise In fact, this must be true if future savings are to be available for investment.

In addition, a profits tax must be met which, by any standards, is high. The method of defining profits for assessment purposes is, of course, of topical interest and a matter of serious concern. The difficulty involves the replacement of real capital during rising prices and is a major risk factor during inflation.[7] Since, as argued above, the profits of innovations must be net of tax, the price for the manufacturers product will probably be higher than without the tax. Security profits again will assume more importance. This suggests that the tax is to some extent shifted to the consumer in the form of reduced profitability of investment. [8] In line with the above approach, the burden of risk-bearing, increased because of high taxation, is shifted to the consumer.

7. The nature and scope of this problem is discussed in great detail by F.W. Paish, op. cit., pages 76-78.

8. This was, basically, the argument of N. Kaldor in a paper read before the Manchester Statistical Society and reported in the Manchester Guardian, March24, 1955.

Further, the entrepreneur must provide out of gross profits sufficient for the finance of a good deal of current assets as well as a reserve for expansion of his business. In some cases, this may well prove impossible, especially if prices are competitively determined, so that the entrepreneur may be forced to rely on new issues for expansion purposes. This, therefore, amounts to a genuine squeeze of profits.[9]

It would be ludicrous to argue that all profits are caught between rising wage costs and competitive prices. In an inflation, there are some industries (just as wages) whose incomes are more active than others and which as a result will enjoy excessive profits, and some small enterprises whose incomes are passive will be in considerable difficulty. However, if the profits incentive is to be retained, they must be great enough to encourage the efficient use of resources, and, at the same time, furnish a major part of government revenue.

d. The drive to make profits secure.

The element of risk has played an important role in the organization of combinations, cartels, etc., that took place during the pre-war era. The influence of high competition was sufficient to encourage these organizations in order to restore "prices to an economic level".[10]

9. The position of the small company could not be better presented than in a statement made by the managing director of Ransomes & Rapier, an Engineering firm. " .. Take this firm as an example. Profits in 1954 came to £208,533 of which £107,923 was paid to the Chancellor of the Exchequer. The new wage claim now being discussed in the industry would directly cost us £53,000 a year. We then anticipate an increase in price of all materials and bought out goods which would probably amount to not less than £120,000. This would leave profits before tax of £24,533. Included as a trade charge in 1954 (before tax) was an amount of £42,470 paid to the men as incentive bonus after all normal piecework earnings had been met. Dividends absorbed about £38,000.
The position today is that we are committed ahead for a year with orders at prices already fixed. It is imperative that we should maintain our reserves and therefore, if this award is granted
(continued p.119)

10. House of Commons 136, page 21.

Restrictive practices and monopolistic control succeeded in reducing the risk and increasing security profits, so that, in many cases, investment designed to produce more efficiently could be undertaken without the danger of excessive competition. As a result, real costs in the post-war period have in most cases been lower than pre-war so that the charge of excessive profits could not be made by the Monopolies and Restrictive Practices Commission. [11]

In fact, these organizations have made a great contribution to price stability during the post-war inflation. Their advantage has arisen from the rationalization of the past; consequently, the combination of competition from abroad and the threat of the investigation by the Commission has resulted in moderate prices at a time when excessive profits could be made. Since the control of inflation demands price stability, even if prices of some products are higher than the competitive price, the fact that they are stable is an important contribution.

9. (continued from page 118) we may at once have to drop our incentive bonus scheme unless output immediately goes up. If the increase is granted the best we can see after provision for the sum necessary for our normal dividend, which has remained fixed for a long time, is a payment to reserve of about 50% of the normal. We shall immediately have to put up prices to meet our anticipated liability in 1957 and then inevitably be met with increased difficulty in world markets which are daily becoming more competitive ... "
Letter to the Times, January 27, 1956.

11. The single exception to this is the British Match Corporation, see report of the Monopolies and Restrictive Practives Commission, House of Commons 161.

Ultimately, the answer to any inflation, particularly to wages-prices spiral, is, of course, innovations. [12] Profits of innovations are anti-inflationary, whereas security profits are, by raising the price level, inflationary. Since it is highly unlikely that innovations can be successfully undertaken without some degree of security profits, prices must first rise; therefore, the fact that profits are high during the post war inflation does not mean that they are necessarily excessive. They must be high if economic activity is to continue. However, if the general standard of living is to improve as well as price stability to be secured, profits of innovation must be encouraged. In this, the taxation system will play a vitally important role.[13]

12. The inherent possibilities available to a nation were well stated by a leading industrialist. If new inventions and techniques could effect a 10% reduction in the cost of living, £150 million would be saved by the government in expenditure. Income tax could be reduced by 8d on the standard rate; hence £1,000 income would gain £123 in purchasing power. Under current circumstances, a £225 increase would be required, "to be swallowed up by price increases".

Harry Ferguson in a letter to the Times, Jan. 18, 1956.

13. An ingenious method of applying a profits tax designed to encourage innovation is suggested by G.L.S. Shackle. It involves a determination in advance of the expected profit rate from an innovation and the deviation above or below this rate to be taxed at a progressively higher rate. The practical application of such a method, Shackle admits, would involve difficulty, but the theory appears to be sound. Expectations in Economics, Cambridge University Press, 1949, Chapter V.

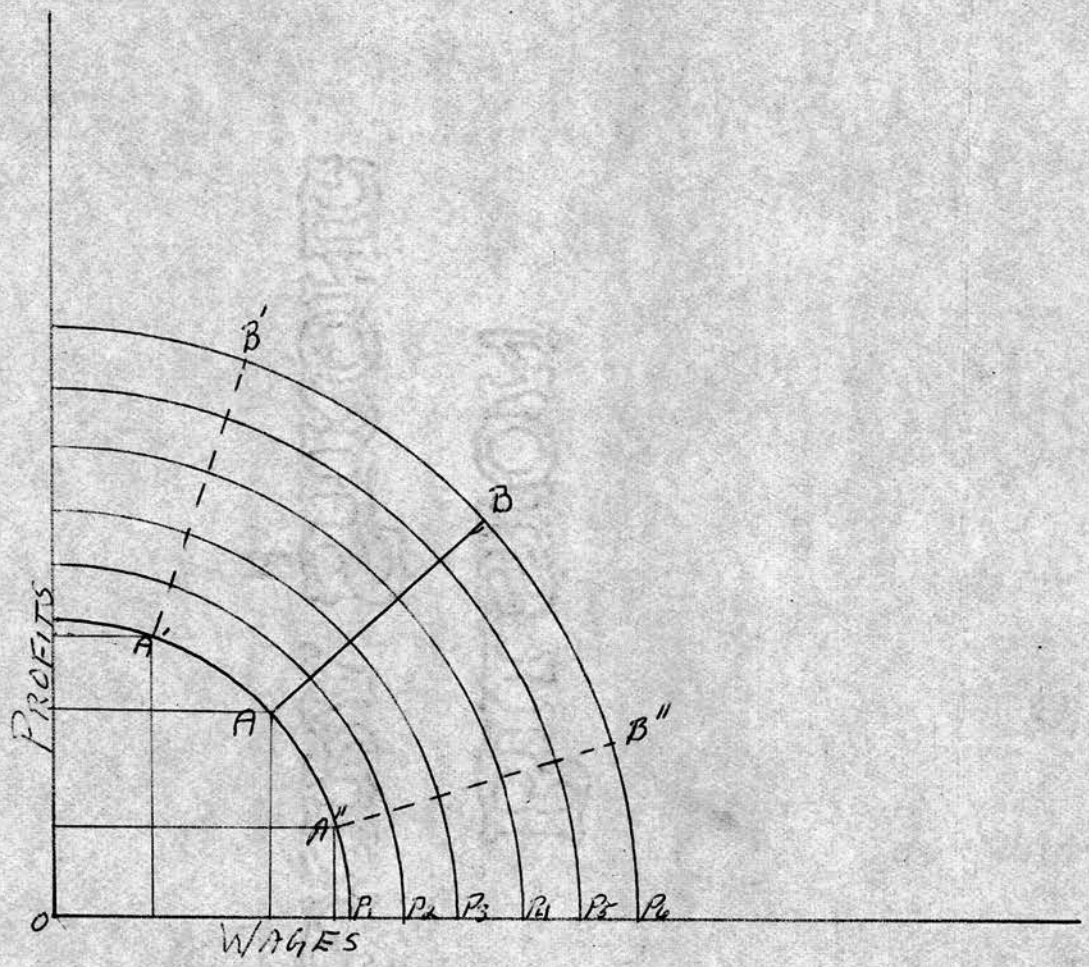


DIAGRAM 1
(Relationship of Wages and Profits)

CHAPTER 8

INDUSTRIAL CONTACTS OF LABOUR AND MANAGEMENT

The two active income sectors have been examined in order to determine their structure as well as the pressures which are responsible for their "activeness". This chapter will be concerned with the relationship between the two and the formation of the wage bargain.

The conclusion was reached that the actions of both labour and management are motivated by the drive for security. During rising prices, labour attempts to defend its real income, and, at the same time, increase its distributive share which results in a constant or rising real income. Lack of purchasing power has a significant meaning for labour with its unpleasant associations of pre-war unemployment. In the same way, the drive for security actuates the policy of management as it resorts to price rises in order to defend or increase its share; thus inflation enhances the risks of entrepreneurship just as it threatens the living standard of labour.

When these efforts by labour and management to achieve security become mutually exclusive, prices will rise. The situation can be visualized in graphical form with labour's income on one axis and profits on the other. A series of price curves, concave to the origin, will then exist so that, in order to remain on one curve, an increase in one income will be gained at the expense of the other. If this is impossible, equilibrium will be reached only on a new and higher price curve. The ratios of each income to the other would, of course, be represented by the slope of the curve at a particular point.

Any alterations of income ratios would be shown by a shift of the line AB in favour of one income and against the other. A'B', for example, would represent a large profits share and a small wage share. A''B'', on the other hand, would suggest a large wages share and a small profits share. Should both incomes increase by the same percentage, these shares would remain constant as a new price curve is reached; however, should the larger share rise by a greater percentage than the smaller, the new price curve will be reached more quickly that if the smaller share were to rise by a higher percentage that the larger. This is implicit in the equation of distribution (page), as well as in the diagram, if the equation is applied to a particular industry instead of to the national income.

a. The wage bargain and its environment.

In the wage bargain, two social communities, each with different objectives and backgrounds, are negotiating an agreement collectively.[1] Each has built up a complete system of ethical principles in the same way as any national or regional community. Each tries to influence the thinking of its members as well as individuals outside the community and thus secure a more favourable bargain for itself.

Both enter into negotiation in the classical manner of buyer and seller, for one will set a selling price for labour and the other a buying price. The selling price, of course, will be higher than the buying price and the agreed price will represent a compromise.

1. The term "social community" is taken from J.T. Dunlop, "An Environmental View of Collective Bargaining," Labour Problems: Cases and Readings, London, McGraw-Hill, 1953.

However, the final agreed price will be generally in favour of one or the other since it would be a remarkable coincidence if it were exactly neutral in the sense that management's loss exactly equaled labour's gain. Therefore, all wage bargains will have what may be termed a "labour bias", or a "profits bias". The importance of one or the other for an inflationary wages-prices spiral can be illustrated. Suppose an industry is forced to concede a labour-biased agreement. The cost structure of the entire industry would have to be adjusted to the level of wages which could result in higher prices unless production were to rise. A profits-biased agreement, however, would require little or no adjustment of cost structure and would involve an increase in the profits share, especially if production increases are foreseen. A neutral wage agreement would involve no change in income shares with any benefits of higher production accruing to both labour and management. Price competition, for instance, may force an industry to conclude a labour-biased agreement during full employment since price rises are discouraged and wage increases easy to secure. However, if the state of demand is such that wage increases are reflected in higher prices, a profits-biased agreement may result, if the price rise is greater than that required by the wage increase or if higher production increases the share of profits.

In Great Britain, the trend of national opinion has been in favour of the labouring class. This has received concrete expression in the form of the Welfare State with its accompanying legislation influenced by the political pressure of labour. The taxation system, for instance, is heavily labour-biased with its earned income allowance, and the benefits received in the form of reduced rents, national insurance, etc. are primarily designed to assist lower incomes. This sympathy for the working class will constitute a general pressure which will tend to weight a wage agreement in favour of labour. Since the

majority of the population are workers, this pressure may be considerable.

A second influence which tends to cause a labour-bias, which no doubt is of prime importance, is full employment. It has long been observed that full employment entails rising wages and price with or without Trade Union influences. Full employment itself suggests a labour shortage in relation to the demand for products and for the labour necessary to supply them. An industry, therefore, is forced to attract and hold its labour or be forced into a position of loss of profits from idle plant or reduced capacity. In many cases, the position for the employer is one of losing men who have been trained at the employer's expense to similar industries where the special ability will receive a higher reward.[2] In such a situation, the employer would be forced to grant a labour-biased wage agreement or face the loss of the expense involved in training his labour staff.

In addition, many firms will operate on the "all or nothing" principle. A given supply of raw material and labour will be necessary to keep the production process at an economic level. If the plant is an integrated whole, the loss of some labour will require the closing of the entire plant. The resultant loss to the employer would be so much greater than the granting of a labour-biased wage claim that he will have no choice.

For some industries demand for products will be so high that it is profitable to attract labour with overtime and incentive payments. This increases production and the labour supply along with the price level in order for the overtime working to be profitable, but the supply of labour available to the industry has increased largely at

2. In a recent wage increase granted in the Electrical Industry the employers pointed out that they were forced to consdier the 4d per hour granted in the Electricity Supply Industry since the loss of trained men could be considerable.
The Times, January 3, 1956

the expense of other industries. Thus, competition for a limited supply of labour raises the effective price at which labour can be purchased.

b. Pressures on management.

The "bias" of the wage bargain will be determined by the pressures exerted on each of the contending parties. These will arise from within both Union and Management as well as from outside environmental influences. In the case of a wage claim put forth by the Confederation of Shipbuilding and Engineering Unions in 1953, to take one example, these pressures on the employer, both external and internal, can be identified.

The Engineering industry accounts for about one half of the exports of the United Kingdom, and is domestically capital producing. This, at once, suggests international price competition which will have a strong external influence on the employer during a wage negotiation. Growing competition from abroad will act as a check on the limit to which prices can rise. There is no evidence that this competition was keenly felt in 1953, but it was foreseen by the employers in the form of declining export orders.

The finance of the industry shows the existence of further internal pressures. The total income of Engineering amounted to about £290 million in 1952 from which profits yax plus income tax, £135.3 million, was deducted. This left 154.7 million from which was taken £55.45 million for dividends, etc., leaving about £100 million for a balance.[3] The Union's claim however, was that the increase

3. These figures are calculated from Table 31, National Income and Expenditure, and Table 85 of the Ninety-eighth Report of Commissioners of Inland Revenue, Cmd. 9667.

in wages demanded would cost the industry £75 million per year. Now the pressure on finance is obvious, for something had to be adjusted - either the wage claim would have to be scaled down or other payments reduced if output could not increase. In actual fact, output in the industry rose by about 11% from 1952-54 (profits of innovation) so that the wage increase of around 15% could be met without very much difficulty. The financial structure of the industry remained practiaally the same, since prices were constant, with only a slight drop in the distributive share of net profit (12.5% of total output in 1952 - 1953 to 12% in 1953 - 1954). To a large extent, therefore, the claim made by the Union was not mutually exclusive since the increase in output balanced the wage claim. If this increase in output had been forseen during the negotiation, the pressure on management would have been reduced. If it had not been foreseen, the necessity for meeting a permanent increase in costs, and, at the same time, successfully competing in foreign markets would have forced a strong resistance to the Union's claim.

Other industries were not so fortunate, however, as can be seen in Table XIII below. Textiles were steadily losing in profits' share as production and prices fell with wage costs rising. Leather manufacture was in an even worse position. Among these industries, price competition makes it difficult to recoup the loss of profits; hence, a genuine "squeeze" results. Among these industries, wage negotiation will have a definite labour bias. Wage earnings tend to be low in the first place so that gains made by labour will closely reflect the movement of retail prices. Since these gains were not included in higher prices, there is no danger of the cost of living rising as a result of the gains. In fact, in negotiating a wage claim in the Cotton Industry, the representatives of the maintenance workers asserted that wages should not reflect the financial state of

the industry but rather the cost of living.[4] This constitutes a reversal of the "ability to pay" principle and shows clearly that unions will use any argument to justify a wage claim.

TABLE XIII

Share of Profits in Manufacturing in Total Output compared with Wages, Prices and Production.

	Total Profits share as percentage of turnover			Wages	Prices	Production. @
	1951-52	1952-53	1953-54	1952-54	1952-54	1951-54
	1.	2.	3.	4.	5.	6. 6.
1. Mfg.of mining products other than metals & Coal	11.6	14	14	+13.5%	+6%	+6.3%
2. Chemicals ...	9.3	8.4	8	+15%	constant	+24%
3. Iron and Steel	9.8	12	12.3	+13%	+3.5%	+10%
4. Non-ferrous Metals	9.7	9.4	7		---	+1%
5. Shipbuilding and Engineering	13.3	12.9	12.4	+13.3%	constant	
6. Electrical Eng'ring.	12.3	13	12.4		constant	+10%
7. Vehicles	8.1	8.3	8.2	+16%	---	+25%
8. Other Metals	11.5	14.1	12.6	+13.8%	+6%	- 2%
9. Precision Instruments	10.1	10.8	10.9	+12%	---	+9%
10. Cotton	12.4	10.9	8.7	+13.7%	-5%	- 1%
11. Wool	11	6.3	8.6			
12. Other Textiles	11.9	11.1	9.5			
13. Leather Products	11.2	8.3	6.3	+10%	constant	- 1%
14. Clothing	7.6	6.6	6	+10.8%	constant	+2.7%
15. Food	6	6	6.3	+11%	+8%	+15%
16. Drink	9.5	10.4	10.2		constant	constan
17. Tobacco	4.5	4.7	3.7		constant	constan
18. Wood and Cork	8.1	8.1	7.4	+13.8%	-7%	+14%
19. Paper and Printing	13.7	16.3	11.1	+13.5%	-15%	+10.5%
20. Other Manufacturing	10.8	9.6	7.8	+13.8%	- 1%	+ 9%

@ - 1952, a recession year, was not representative of production increases due to improved technique.

------- not available

Source: Columns 1 - 3 - Tables 83 to 96, Ninety-Eight Report of the Commissioners of Inland Revenue.
Column 4 - Ministry of Labour Gazette
Columns 5 and 6 - Annual Abstract of Statistica, Tables 340 and 146

4. Industrial Disputes Tribunal Number 761.

Internal pressures for management, therefore, consist of the obligations of gross profits. These are considerable, particularly taxation, and if an industry is to maintain production, they must be met. If a wage claim can be met wholly by increases in production, there will be no incentive for management to resist since both labour and profits will increase absolutely, with no change in the share of either. However, if profits are already "squeezed", as in the case of textiles, wage claims must be resisted if the profits sector is to regain its share. Any wage agreement would be labour-biased as long as competition prohibits prices from rising.

With less competition, price rises designed to offset all wage increases would result in a profits bias, for the price increases themselves would contribute to the cost of living, leaving real profits more secure than real wages. The obligations of the profits sector are largely fixed in that the larger share of gross profits is relatively constant. Dividends only will be affected by cost of living increases, whereas the other payments will not. Labour, therefore, will lose much more than gross profits when the index of retail prices rises.

c. Trade union pressures.

From the Trade Union side, there are many and varied causes for action, only a few of which can be identified since each union will have its own objective in a particular case.

1. Wage gains at the expense of profits.

Since the primary concern here is the wage bargain, only such pressures as will affect the agreed wage will be considered. There are, of course, major differences between wages, the payment for labour, and gross profits, as has already been implied in previous discussion. These

differences are fundamental, and while it is a truism to point out that in the last resort labour and capital are both essential to production (hence there is no real difference in their interests), there are, nevertheless, important conflicts, especially when the two incomes are mutually exclusive. Thus,with the security drive, while it is obvious that job security for the employee is, in the long run, closely connected with the prosperity of the nation and industry, it is not at all clear to the Trade Union and its members. The raison d'etre of the Trade Union Movement is based on job security for its members, principally by substituting collective action for the atomistic wage negotiation in which workers compete for jobs. It is to be expected, therefore, that the function of the Trade Union during full employment will be one of protecting the real earnings of the membership, if necessary at the expense of the profits sector.[5] This is now part of the mores of the social community of labour.

The fundamental conflict between the two sectors arises from the nature of the two incomes. Labour's income will be used primarily for the purpose of direct consumption with a small residual for saving. The cost of living, therefore, will be of primary importance. Only a small portion, dividends, interest,etc., of gross profits, however, will be used for direct consumption, the larger share, being devoted to taxation and maintenance or expansion of production. The two incomes will be mutually exclusive when the pressure of the cost of living on labour is so great that wage demands are made independent of the productive ability of industry.

5. A curious definition of the function of the Trade Union by an American union leader is "Our main function as a union is to make wages so high that the employer has to substitute capital for labour". The basis of this is increased productivity, but if applied as a general rule of conduct, it could be highly inflationary, especially in Great Britain.

The conflict is intensified by the necessary restriction of the freedom of the employer. In the past, the employer could pay what he considered his finances could afford; the fact that the wage was a "living wage" depended on either the state of the labour market, or his generosity, and, though he may have been acting in accordance with economic laws of wage determination, he was certainly not aware of the fact.

Any wage gains will constitute an increase in real income for labour unless the price increase is greater. The reward for the Trade Union in successful negotiation is, consequently, a tangible one, measured in terms of shillings. An increase in gross profits, however, may not constitute an increase in anyone's living standard unless higher dividends are distributed; hence, the only legitimate argument on behalf of labour regarding high profits would be that dividends are excessive, for to demand higher wages on the basis of excessive gross profits, as did the Engineering workers (see above, footnote 10, page 90), is tantamount to suggesting that profits tax as well as the other claimants of shares of gross profits is also excessive.

This fundamental difference in the nature of the two incomes could be resolved by a profits-sharing scheme through which labour would assume part of the risks of entrepreneurship. If this were in existence in the Textile Industry, the income of the worker would probably be depressed in relation to other incomes. This would necessitate either a shift of the worker to other industries, or acceptance of a depressed standard of living, but these risks the workers are not prepared to assume since wages are so much more vulnerable to the cost of living than are gross profits.

However, this is not to suggest that there are no points of common interest existing between labour and management, for, though the two income sectors may be in opposition when they become mutually exclusive, it will be to the advantage of both to increase production so that the incomes of both can rise. It would be to labour's advantage just as much as to the employer's for management to plough back into the industry a certain proportion of gross profits. Wage claims could then be met out of increased productivity rather than by a reduction of the share of profits. On the other hand, if management devotes a high proportion of its earnings to increasing reserves for the payment of future dividends or to make the industry more "liquid", the benefits of high profits will accrue to the shareholders as increased value of shares. A short-sighted policy of the Union, therefore, could result in future wage conflicts by wage demands which can only be met out of reduced investment.[6] Such pressure will force management to seek further profits from higher prices and thus continue the process of a cost-induced inflation; hence the "function" of the American trade union (footnote 5) is only feasible if availability of capital is not restricted.

A wage agreement with a labour bias will increase aggregate demand by increasing the purchasing power of labour. Since the agreement is concerned with wage rates only, earnings as determined by agreement between the individual employer and employee,

6. This was expressed by the Shipbuilding Union in negotiation for a wage increase. A high level of reserves was unnecessary because "... reorganization had begun before the war and in a number of yards no further modernization was necessary, because they were as efficient as any in the world. Court of Inquiry Report, Cmd. 9085.

will rise by more than the rates.[7] The effect of the increased consumer demand will be transmitted via the accelerator throughout all industries so that the rise in wage cost will be readily absorbed by increased prices. Only those industries highly dependent on foreign markets will find that demand is insufficient to absorb cost increases; hence a labour-biased agreement would be more difficult owing to the resistance of the employer. Domestically, the increase in prices will result in a partial loss of purchasing power for wages as profits regain their share with rising prices. The labour bias of the wage agreement, is therefore inflationary..

Should the demands of the Union be successfully resisted so that the agreed wage is nearer the management's offered wage (a profits-biased agreement), the possibility of increases in demand and corresponding price increases becomes more remote. Consumer demand will not rise so much as it would if the agreement were in favour of labour. Money in the hands of wage earners will be activated much more than in profit reserves.

2. Monopoly of labour.

In addition to the cost of living, other pressures on Unions can be noted. The Trade Union Movement can never be absolutely secure if any group remains unorganized. Any unorganized section

7. In October, 1955, the earnings index was 181 with the wage rates index at 155 for the same industries. Presumably, the excess of earnings could support 17% ($\frac{181}{155} = 1.168$) more workers at the current wage rate.

becomes a potential threat to the collective action of the particular labour community, hence, the bargaining power of the Trade Union must be weakened.

The "Union shop" is simply an application of this principle to a particular firm, and, when extended to all parts of the industry, the monopoly of labour is secure. A complete monopoly not only strengthens the bargaining power of the Union, but also enhances the power of strike action. The significance of this lies in the fact that no employer is free to lay down terms of employment for any of his workers, but must negotiate with Union representatives. In pursuit of this objective, enormous pressure can be brought to bear against an employer who refuses to concede the "rights" of his workers to join a union." This will amount to boycott and blacklist of products so as to force the offending employer to grant union recognition.[8]

In fact, it is a question no longer of better working conditions for labour, but the fundamental right to organize, which labour considers a part of its natural prerogatives. With the wage bargain and working conditions institutionalized, the freedom of the employer is confined to the narrower limits of entrepreneurship and must manufacture his product with a wage cost determined not by his own structure of costs, but by the large Industrial or Craft Union in negotiation with the equally large Employers' Federation. This is, indeed, an important restriction of freedom, for instead of wages equating to marginal productivity, marginal productivity must equate to wages. Further, should a manufacturer attempt to equalize

8. An example of this is furnished by the case of D.C. Thomson,Ltd. versus the Union of Printers. Court of Inquiry Report, Cmd. 8607

his marginal productivity. In order to maximize his profits, his entire productive set-up must be geared to a wage cost which is determined for him. This, of course, applies to all individual manufacturers in a system of industry-wide bargaining.

3. Inter-union rivalry.

Another pressure felt by labour is the traditional function of the Craft Union. The leadership of the craft union will be under an obligation to its membership to protect the differentials between it and other industrial workers. Typical of the type, of course, are the Railway Unions and the Printers' Union.

The principal difficulty here is the fact that improved technology has made traditional craft distinctions obsolete. Instead of a natural monopoly of skill which originally divided the craftsman from the labourer, the unions are forced to rely on artificial monopoly by limiting membership into the Union. In this way, they are in a position to insist on the differential (see page 94 above). Unfortunately, however, an artificial monopoly and the consequent differentials in wages do not attract labour to its most advantageous use, the only way that the productive capacity of the nation can be increased to its maximum.

In this sense, the social community of the craftsman, with its long-standing tradition, has outlived its usefulness. In the Railway, the distinction among crafts has produced a situation wherein the claims of one union, if met by the employer, will be followed by further claims by another to protect the differential. What is required is either an amalgamation of the craft union into the industrial union or an agreement on differentials among craft unions and industrial unions within an industry. At any rate, this is a problem which should be resolved by labour and not be used at t

at the bargaining table for wage claims.

Doubtless the Trades Union Congress could do much, were it to assume the responsibility, toward settling the question of differentials for craft unions. Through this medium, national agreement on the value of skills for certain crafts could be achieved with due regard for the needs of the country. In this way, one important source of labour's pressures could be removed. As long as it exists, a strike of key workers in a particular key industry such as in the Railway, can have disastrous results on the national economy.

In response to this craft pressure, the unions concerned will find it to their advantage to negotiate with their employers on as localized a basis as possible. Theirs are the individual problems not to be weighed against the background of the national economy. In the Printers Union, the threat of submission to an Arbitration Tribunal was sufficient in May, 1950, to force a withdrawal of a wage claim. [9] Instead an embargo on overtime working was used as a means of coercing the employers. Therefore, a unified national wage policy will, as a result of the obstacles created by these craft unions, be very difficult to achieve. Further, since the British traditions die hard, these unions will exist for many years to come, reacting to the pressures of opinion among their leaders and members which were responsible for their existence.

Again, however, the evidence suggests that security is the prime concern of the craft union. This security is, unfortunately, achieved in a different manner from the industrial union. Fears of

9. Court of Inquiry Report, Cmd. 8074.

unemployment and loss of differentials are justifiable, but the method of overcoming these fears is not. The only successful method of achieving job and wage security would be to have genuine collective bargaining with differentials agreed upon in advance; the alternative is a spiralling of wage costs with the corresponding spiraling of prices and the subsequent loss of real wages.[10]

4 Unofficial action.

A further labour pressure exists in the form of loss of confidence in leadership. There are, apparently, sections within the union which tend to be more aggressive in their demands and are dissatisfied with a moderate policy pursued by the trade union leaders. This tendency has been strongly reflected among the Dockworkers who have been organized by the large Industrial Union. In their view, the administration is too remote from the rank and file to understand the problems of the individual; consequently, an unofficial "Portworkers Committee" appeared among London dockworkers in 1948 which, supposedly, bridged the gap between the members and the leaders. As a result of this, minor grievances can be expanded into major strikes with their consequent disastrous results.

The difficulty here may well be that the Industrial Union, particularly the Transport and General Workers Union, is too large to represent the workers in negotiation over minor grievances. If this is true, it is a problem to be solved by union administration;

10. The Court of Inquiry concluded concerning the latest printing dispute that the manpower shortage in the Printing Industry had increased over the five years since the 1950 Report had been published. Overtime had increased by 60% with no unemployment. Also in this report, the Court pointed out the lack of co-ordination among the several unions within the Industry.

however, in the case of the dockworkers, the evidence suggests that considerable improvement in amenities for the workers could be made so as to improve the morale of dock labour. Since this type of work has been traditionally casual, there has been a lack of job responsibility; hence much could be done by the union itself toward encouraging a more responsible outlook.

In other cases, such as the miners in the coal industry, unofficial action is based on grievances which may arise over a large number of causes. The failure of the union leaders to recognise the seriousness of these rather minor disturbances is largely at fault. While the chief concern of the union representatives may be a national wage policy, local issues must not be overlooked. These, however, should be settled at the union level instead of by direct action against management.

This list of union pressures is by no means complete since many more undoubtedly exist. There will be as many reasons for union action as there are for human action, and inter-relationships of these pressures add to the complexity of the particular situation. These, however, are the major ones which can be identified and analyzed. They spring from traditional organization as well as from the values of the social community which finds expression in union organization. Above all, these pressures are real and must be reconciled in one way or another.

d. Conflict of these pressures in wage negotiation.

Basically, these are the forces which are in effect during the bargaining process. Their interplay, taking place within the environment of full employment, will determine the wage bargain. To review briefly: there are pressures exerted on both union and

management which influence them in negotiation. For management, these will be external in the form of price competition, and internal in the financial structure of the industry. For labour, the cost of living, traditional differentials, of craft unions, the drive for complete monopoly control of the labour supply, and dissatisfaction within the ranks of trade unions which leads to unofficial action are the principal pressures. The interaction of any or all of these pressures will determine the wage bargain. The employer's federation, a social community with quite different objectives from labour, faces the trade unions, each with its own pressures, to agree on the price of labour.

The employer's representatives are confronted in many cases with more than one union and are forced to conclude a wage bargain with each. When the pressures of the unions become conflicting such as in the three Railway Unions, the employer is faced with the dilemma of agreeing to a particular wage with one union only to be presented with a claim based on differentials by another. Since each union is independent of the other the employer has the impossible task of reconciling conflicting pressures which ought to have been agreed upon by the unions themselves prior to the bargaining process with the employer. In such cases, failure to accede to the demand by any one of the trade unions involved may result in crippling strike action which could have diastrous effects. Faced with what may be regarded as too many pressures, the employer is in a most disadvantageous position. From his own point of view he cannot, in some cases, grant the wage claims necessary and maintain stable prices owing to the financial obligations of gross profits. Should

the pressure of competition force him to keep prices from rising, the only other source of profits is production.

Production increases, however, require a certain minimum of time for maturing, and, since the employer has no guarantee of stable wage costs at any time, he cannot be sure that the benefits of higher production will accrue to profits.[11] Further, he is never free from the threat of unofficial strikes. Since the wage agreement cannot be legall enforced, the profits of higher production are perpetually in danger. For the textile industries, this will present an impossible problem. For others, the profits of security are the only guarantee of financial solvency; hence, prices will rise to the competitive limit. Thus, it is the failure to guarantee to the entrepreneur the degree of security he requires that forces him to raise his prices and his security profits. This, of course, is made easier by the large increase in demand which results from the increased purchasing power of labour.

The position of the entrepreneur is made even more difficult by the very nature of the wage demand. Wage increases of about 10 or 15% are quite common indeed, but as wages increase, the wage demand based on the same percentage, increases absolutely. A 10% wage demand in 1954 in the Engineering Industry was 50% greater than in 1948. When translated into prices, this means rising prices which

11. The British entrepreneur is much less secure than his American counterpart. American wage contracts are legally binding, and until the termination of the contract, wage costs are stable. The planning of the production process can take place, therefore, within a secure cost framework without the threat of strike action until the contract expires and the negotiation for a new one, a renewal of the old, begins.

increase at a greater rate than before. Further, it is useless to ague "dividend restraint" in this case as a prerequisite for wage restraint, for, in the Engineering industry, dividends before tax amount to about £60 million in 1953-54. Were dividends to have been completely withheld and applied to wages, they would have met a wage cost increase of 10%. Indeed, one is as justified in arguing tax restraint or reserves restraint as to insist upon dividend restraint. It appears, therefore, that without production increases, wage claims must result in higher prices.

Until such time that a unified wages policy can be agreed upon, which will reduce the pressures of labour, the system of wage negotiation must have a labour bias. The environmental influence of full employment (more jobs than men) suggests that labour can move from one job to another quite easily; therefore, the obligation of the entrepreneur is to keep his labour force, that is, to reduce the mobility of labour, as well as to apply it most efficiently. This must be accomplished if production is to be increased or maintained, for with high demand for a product, the loss of the marginal worker means a greater loss in value of production than the gain of a smaller wage bill. It will be to his advantage to offer incentives in the form of bonuses and overtime even though the extra production which results may not, in some cases, be worth the increase in wage cost involved.

The ideal to be achieved is a neutral agreement in which neither labour nor management gains at the expense of the other. An agreement is neutral that raises the wage level of an industry and is met by increased productivity rather than higher prices to protect the profits share. In this way, both labour and management suffer no loss of security, but gain a great deal.

Under the present circumstances, a labour-biased agreement implies considerable adjustment of financial structure owing to the size of the wage bill which is a major part of costs, and the obligation to meet rising replacement cost of circulating and fixed capital makes this adjustment more difficult.

e. Labour - biased agreements.

One solution is the reduction in the size of wage costs in relation to other costs of production. This could be accomplished by increased capital investment in labour-saving innovations and would be represented by a shift of funds from the wage cost sector to reserves necessary for investment and a replacement of capital. If accompanied by rising production, a net gain would result for profits. Rising wage costs could then be met without a reduction in profits' share since the relative increase in wage costs would be smaller. There should be no fear of unemployment of labour since no absolute reduction of wage costs need occur, only a reduction relative to the size of the gross profits. The only possible danger of unemployment due to redundancy of labour would be during a transition period which would be so quick that absolute wage costs would fall. This would occur if investment in labour-saving innovations were to proceed so fast that increased production would exceed demand; hence it would be to the advantage of the entrepreneur to discharge redundant workers rather than lower prices. This need not happen, however, and probably will not in Great Britain, for as the labour force is shifted to new and more efficient techniques of production, there is no logical reason for expecting an abrupt discontinuance of the elder, less efficient methods. No innovation so revolutionary could be introduced without enormous capital

expenditure, the source of which in terms of real wealth is unavailable. Therefore, as the wages cost declines relatively, it will remain constant or increase absolutely. It may well be true that some plants must, by the nature of the production process, change abruptly to new techniques; the resulting redundancy in this case can be absorbed elsewhere.12

Ultimately, the reduced size of the wages cost relative to the gross profits sector will make possible a wage bargain with a muhh smaller labour bias. New and more efficient production techniques will make possible an increase in labour's income as well as profits without a price rise since distributive shares are constant.

As suggested above, the pressures of labour, as represented by trade unions with unco-ordinated wage demands will so increase the risk of entrepreneurship that capital investment can only be undertaken with rising prices which guarantee profits of security. To correct this situation will require a reorientation of the trade union structure so as to reduce the number of pressures facing the entrepreneur. When this is accomplished, wage demands can be made by labour; indeed, they are to be welcomed, as improvements in productivity occur. In addition, (footnote 5, page 129), they may act as a spur to management to increase efficiency.

12. With the advent of automation, that is, electronic control of the production process which eliminates human thought, the process of "innovating" will involve considerable readjustment of the labour force and will involve orientation to quite new techniques of production. It may be that the above analysis will also require readjustment, and, for that matter, so will Economic Science.

SUMMARY

It would be well to summarize the conclusions reached in this first part before examining the structure of post-war demand.

Chapter 1 was concerned with the money supply which is essential for the finance of an inflationary wages-prices spiral. At the outset this was provided by wartime deficit finance which considerably increased the quantity of money. At the same time, velocity of circulation was restricted by price controls and rationing. Large reserves of cash were available to both consumers and producers which required only the release of controls to resume a normal velocity of circulation. These reserves were largely exhausted by the end of 1948, so that the pressure of wage demands on profit margins became more acute. Further money supply would be required after that year to finance further rounds of rising prices and wages.

Chapter 11 began the discussion of the distribution equation involving primary input factors. The first factor, imports, was discussed and the effects of a cost increase analyzed, with several European countries as a basis. Both quantity and quality were considered as to the result of a "first impart" on the economy. Cushioning or damping effects of this impact were analyzed as 1. the productive process, 2. the ability of industry to absorb the impact, 3, an inflationary psychology which may react positively to increase the effect of the impact or negatively to absorb it, and 4. the control of the central authority.

Chapter 111 continued the analysis by means of the distribution equation, classifying income sectors into active and passive. There are three primary input factors, wages, profits, and indirect taxation. A rise in the distributive share of any one factor

will result in a price rise if other active incomes refuse to permit a decrease in their share. The extent of the price rise will be determined by the passive incomes in the economy and their relative size. The fact, of course, that they are passive does not mean that they always will be, for "activeness" is a purely relative term and should they become more active in defending their share of distribution, the price level will rise still more. Passive incomes, however, represent a force of convergence which acts to narrow the spiral.

A second force of convergence is production. This was analyzed again using the distribution equation, and the conclusion reached that a considerable increase in production was necessary to accommodate an increased share of distribution for one factor without a price increase. A measure of in the "inflationary potential" of Great Britain under current conditions was calculated as being 2:1, that is, a wage rise of 2% will result in a price rise of 1%.

As a result of rising wages and prices, a redistribution of real income takes place in favour of active incomes and against passive incomes. For wages, this redistribution is real because of the failure of prices to rise by the same relative amount as wages. A policy of wage restraint, therefore, based on the principle that prices will rise more than wages is quite wrong.

Chapter IV investigated the income of labour in an attempt to discover a policy followed by trade unions. It appears that trade unions are most anxious to maintain their position vis-a-vis retail prices and other unions. Regarding the former, the retail price index was found to be largely "food sensitive" and, in view of the amount of the consumers' budget spent on food, a food

subsidy would appear to be advisable. By transfering funds from other sectors which contribute the largest share of the national product of agriculture, the saving in real income through lower prices will be greater than the loss of incomes through taxation.

Evidence suggests that union reaction to wage gains in other industries is more psychological than real. Loss of real income through "passivity" is negligible in all cases except from those rises in prices due to wage gains in the Service Industries and in Food, Drink and Tobacco. Tensions are created horizontally by the successful wage negotiation by a "leader" union and vertically by the craft unions which seek to preserve existing differentials.

Chapter V was concerned with the nature of profits as consisting of three parts, 1. profits of innovations, 2. security profits, and 3. windfalls. The first will increase profits without raising prices, the second protects the share of profits through price rises, and the third results from the inflationary process itself. Under existing conditions, it appears that security profits are the ultimate source of management's income since innovations require a certain degree of profitability before they will be undertaken. As an income, profits are as essential for the production process as is any other income and the demands made upon them, such as taxation, dividends, stock appreciation, etc. must be met; hence they become a very necessary residual as a reward for the risk involved in production.

Chapter VI discussed the relation of the two active income sectors in the form of the wage bargain. It was seen that since both are concerned with minimizing the risks in modern economic life, security can become mutually exclusive at a certain level of production.

The tendency, therefore, is for prices to rise if the wage bargain is in favour of labour at the expense of profits. A number of pressures (as opposed to "tensions") were considered which act on both labour and management and which result in labour-biased wage agreements within an environment of full employment. It was suggested that a reduction of these labour pressures would make it possible for the entrepreneur to plan his production process with a reasonable degree of assuredness, thus giving him the freedom necessary to introduce new and more efficient tenchiques.

This examination of the supply structure of the national economy has brought to light some important inflationary tendencies which spring from within the structure itself. These tendencies, it appears, are relatively new, having their origins in the transitional stage of the economy of less than full employment to an economy of full employment. The application, for example, of principles and practices that were quite acceptable during pre-war unemployment are inflationary in post-war full employment. Thus the practice of the printers' unions to restrict membership because of the danger of insufficient funds for unemployment benefits is clearly inflationary during a period of a printers' shortage.

These inflationary tendencies are evident within the government sector as well as labour and management. First, the taxation system itself is inflationary with both an indirect tax, which raises the price level, and a direct tax on profits which raises the expected profitability of investment. Second, the entrepreneur prefers not to assume the risks of innovations when he can increase supply without risk by overtime working and incentive payments. When demand is high, he can rely more heavily on security profits and

increase his labour staff, adding to the competition for scarce labour. Third, the trade unions by unco-ordinated wage demands coming in annual bursts contribute directly to rising prices. These are simplifications, of course, and, in reality, rising prices would be the result of a complex mixture of these and other forces; however, these appear to be dominant.

Most of these tendencies to inflation can be considered as part of the rather elementary drive for security. As suggested at the beginning of this part, the supply of goods and services is inadequate to satisfy the demands made upon it. Since a larger share of goods and services means security for an income sector, it will be to the advantage of that sector to enlarge its share. This it can do by increasing its nominal income, and, consequently, prices by a smaller percentage; hence, real income rises by an increase in distributive share. This is the basis for the distribution equation described above.

While much has been done through legislative action to provide a degree of security to all, apparently this is not enough. Indeed, if it were, no work would be done by anyone. What is required, apparently, is a guarantee that economic conditions will be such that production can take place and the real rewards of production will be distributed to the factors with due regard for the value of contribution. It is,for instance, foolish to criticize trade unions for insisting on higher wages; under present circumstances, they have no other choice. Likewise, it is ridiculous to argue that dividends should be withheld as an anti-inflationary measure, for industry is as obligated to meet its commitments as to pay its wages.

It has no other choice. Until an alternative is suggested, both labour and management must, in response to their own pressures, increase their security positions, either at the expense of one other, or through increased production.

What is lacking, therefore, is an economic plan for full employment. This should inspire confidence in the future stability of the conomic system and the purchasing power of money. Without this, wage restraint cannot succeed. In addition, with such a plan the public can be encouraged to save and thus reduce the pressure of demand.

PART II

THE WAGES PRICES SPIRAL AND CONSUMPTION

The analysis from the side of demand takes the same form as that of supply. Just as production was considered in terms of final output, consumption represents this same output allocated to its various uses. A physical quantity of goods and services must be rationed according to market principles among the sectors which require a share. These sectors can be identified as consumers (C), government (G), investment in fixed capital (F), investment in stocks (S), and exports (X). Nominal final output, then, is -

$$N = C + G + F + S + X$$

As before certain consuming sectors will determine the values of their amounts on a basis of ratios. The propensity to consume, for example, will represent the proportionate share of final output allocated to consumption; likewise, investment in fixed capital and stocks will be determined by a certain proportion. The government, however, will require a certain absolute amount of final output regardless of its size, and the value of exports will be determined by the terms of trade. Accordingly, the above will be read as

$$N = cN + G + fN + sN + X ;$$

again, rearranging terms gives

$$N = \frac{G + X}{1 - (c + f + s)}$$

This, when combined with the cost equation, results in an identity

$$\frac{Y + I}{1 - (e + o + t)} = \frac{G + X}{1 - (c + f + s)}$$

which states no more than that production equals consumption, but

it permits an examination of relationships in their simplest form. Suppose the value of I, imports, should increase. It has already been established that the value of final output will rise by the same amount if the ratios of distribution are constant. If G or X remains the same or rises less than I, the ratios of consumption (c, f or s) must rise. Likewise, a rise in the distribution ratios will be reflected in a rise in consumption ratios if G and X are constant.

Values of these consumption ratios can be set down for the years 1948 - 1954.

Table XV

Ratios of Consuming Sectors to Final Output.

Year	1 c	2 Index	3 G	4 Index	5 f	6 Index	7 s	8 X	9 Index
1938	.672	107.5	.118	93	.103	102	---	.1105	76.7
1948	.624	100	.127	100	.101	100	.01265	.144	100
1949	.643	103	.1335	105	.105	104	.0044	.1555	108
1950	.600	96	.128	101	.107	106	-.01335	.177	123
1951	.55	88	.132	104	.10	99	.0312	.187	130
1952	.55	88	.151	119	.1065	105.5	.0026	.187	130
1953	.558	89.5	.154	121	.115	114	.006	.168	117
1954	.57	91.5	.1467	115.5	.116	115	.0106	.167	116
1955@x	.553	88.5	.14	110	.121	120	.0153	.17	118

@x - provisional

Source: Tables 1 and 7, National Income and Expenditure, 1955.

When compared with 1938 with allowance for statistical inaccuracies of that year, the ratios of investment in fixed capital appear quite favourable. Exports as well have considerably increased over pre-war. What is more interesting, however, is the decline of the consumers' ratio from 1948 - 1949 of 12% to an apparent static level from 1951 - 1955. Reference to Table IX, p. 75, will show the return of the employment income

(e) ratio to the 1948 - 1949 level and the rising profits ratio during this period of a low personal consumption ratio. The answer to this, of course, is personal saving which revived after 1951 and permitted a rising capital expenditure ratio and a high exports ratio.

Just as the supply equation can increase absolutely with constant ratios, the demand equation can do likewise. The absolute value of goods available to the consuming sectors can increase with constant shares. However, in view of the rising cost of capital equipment as compared with consumer goods, there will be a shift in the share of final output from consumption to capital goods.

In addition, the production of capital goods, both fixed and stocks, involves payment of wages and salaries so that the share of final output going to wages can increase with no relationship to the share of output for consumption. As the share of production for capital and export increases at the expense of consumption, the absolute value of consumption goods must increase sufficiently to satisfy the growing demand of wages which rise both absolutely and relatively. The extreme example of this, of course, is the Soviet Union which, by restricting the share of personal consumption goods, was able to increase the production of capital goods since the absolute size of output was insufficient to accommodate the demand for both. Without the coercive power of a dictatorship, however, market demand for consumption goods will rise making it possible for cost increases to be reflected in rising prices. Security profits, in other words, are assured among

manufacturers of consumer goods that supply the domestic market. This, again, is reflected in the capital producing industries in the form of orders for capital goods to expand production.

Referring to the above identity, it is quite possible to reduce the size of the consumption ratio, c, by the encouragement of saving. This would be reflected in a rising capital ratio, f or s. Since fixed capital will result in an eventual absolute increase in consumption goods, the standard of living will ultimately rise with a reduced share of consumption. Obviously, this is the objective of the Chancellor of the Exchequer in introducing a "savers' budget", for, as the share of final output going to wages increases, it becomes even more imperative that labour refrain from consuming.

The identity also suggests that the inflationary process can come from a number of different sources. The left-hand member shows the influence of the shares of distribution to income sectors and possible changes in them; the right shows the effect of the allocation of production to its various consuming uses: Suppose, for example, that the ex ante capital ratio should rise. If this were not accompanied by an equivalent ex ante drop of the consumption ratio, the price level will rise until the new ratio of fixed capital is compensated by an ex post fall in the consumption ratio, exports or government income. Such a rise in nominal output would be reflected in an alteration in the distributive shares of incomes unless the remarkable coincidence should occur that all incomes would rise equally with no change in distribution.

The same would be true for any other sector of demand. If, for instance, exports should rise as a result of a need to earn more foreign exchange, and saving, ex ante, were insufficient, prices would rise. In any case, the rising price level would result in an increased demand for imports since imports represent about 20% of exports.

However, if the rise in prices results from an increasing share of active income sectors (the left member of the identity) it must be accompanied by either a rising consumption ratio, rising capital ratio, or increasing absolute government income or exports. The evidence suggests that the accumulation of fixed capital has been proceeding since 1951 at a rate sufficient to increase its consuming share of final output. In terms of constant prices, this is 18% from 1951 - 1954. Consumers' goods have increased by 8% in physical terms. It appears, therefore, that the rising share of labour's income which is available for increased consumption has been withheld because of rising prices of consumer goods. Personal saving, which amounted to 4% of total output in 1954, was insufficient to keep cost increases from being passed on as higher prices. A much higher level of savings, therefore, is required to keep prices stable.

Considering the identity as real output, it is immaterial during a wages-prices spiral which consuming ratio increases. When prices rise under the conditions postulated (an attempt by one income sector to increase its share at the expense of another) the ratio of consumption or of capital will rise, if G and X are constant. The important

fact is that the process of rising prices had already begun from the cost side and only needs sufficient demand to complete it. Suppose, for example, that in the face of rising wages, measures were taken to check investment. This would result in a fall in the capital ratios and a rise in the consumption ratio. The nominal value of final output will rise under any circumstances whether demand is concentrated on consumer goods or on fixed capital. Checking investment may reduce the pressure of demand through unemployment or short-time working or, in general, reducing the demand for labour, but both unemployment and short-time mean loss of productive capacity for the nation; hence, they should be avoided.

Instead of shifting demand from capital producing industries to consumer goods, which would result from a reduction of the investment ratio, total demand must be reduced by greater voluntary or compulsory saving. Under such a circumstance, industry will find it difficult or impossible to raise prices; hence, it will resist wage demands and turn to profits of innovations as a source of revenue. The difference between reducing total demand moderately and a part of demand considerably, is that the former utilizes productive capacity more efficiently than the latter. Consumer goods industries working overtime and paying high incentive payments are a poor compensation for unemployment or short-time working in capital producing industries.

Apparently, the error of checking investment by high interest rates results from failure to see the economic system in terms of real output. As shown by the identity, shifting demand from one consuming sector to another does not reduce

inflationary pressure of total demand except indirectly through reduced income payments to labour. Future productive capacity is, of course, endangered by a short-term policy of discouraging investment.

This part, therefore, will be concerned with the components of demand, the second phase of the wages-prices spiral. The various consuming sectors of final output as set forth in the above identity will be considered and their contribution to the spiral assessed.

CHAPTER 9

THE PERSONAL CONSUMPTION SHARE OF FINAL OUTPUT

a. Surplus of personal income available for consumption

The analysis will begin with what is the largest sector of demand, consumers. Table XV shows consumers' goods as representing over half of final output, about 55% from 1951-1955. The relation between wage cost and the consuming power of the public is obvious from the fact that wage earners represent a high proportion of consumers. An increase in wages will therefore, increase the consuming potential considerably. The magnitude of the potential can be seen by comparing disposable incomes with the supply of consumer goods available at the price level of the year preceding.

Table XVI

(The figures are in £s million)

	1948	1949	1950	1951	1952	1953	1954
Total Disposal Incomes	8,589	9,027	9,504	10,388	11,355	12,070	12,717
Personal Savings	84	122	99	284	785	902	863
Disposable Income less Personal Savings	8,505	8,905	9,405	10,104	10,570	11,168	11,854
Supply of Consumer Goods and Services at Constant Prices of Preceding Year	7,910	8,693	9,050	9,395	9,945	10,975	11,660
Excess Consuming Power	595	212	355	709	625	193	194
Index of Market Prices	100	102	106	114	121	123	125

Source : National Income and Expenditure 1955.

The greatest price rises occurred during the years of the largest excess of consuming potential. It would seem from these figures that an excess of about £200 million accompanies a 2% price rise. Since about 80% of the increase in disposable income represents income from employment, a wage increase will swell the consuming potential considerably.

Now, for the sake of estimating the magnitude of the surplus of earnings over wage rates, it is possible to reduce the income from employment by the ratio that the index of one bears to the other. Since wage rates are roughly equal to the cost of living, it should be possible to arrive at an approximate surplus due to incentive payments.

Surplus of income due to incentive payments
(£s million)

1948	1949	1950	1951	1952	1953	1954
313	464	767	850	915	1,060	1,310

When these figures are compared with the "excess consuming power" plus personal savings in Table XVI, the contribution of payments in excess of wage rates to disposable income is seen to be considerable. This is the only valid conclusion which can be made from figures that have no precision and are only estimates.

Ratio of personal savings to employment income surplus.

1949	1949	1950	1951	1952	1953	1954
.268	.263	.129	.334	.86	.85	.66

This suggests that the working class is becoming a saving class, and, indeed, it is not at all surprising considering the fact that price of consumer goods rise by only half the increase in wage cost. It also suggests that a certain level of wages and prices is essential for an "equilibrium" level of savings. Given a propensity to consume by workers, this would seem quite logical.

As the identity shows, an increase in wage costs resulting in a rising share of employment income will raise the money value of the final product. With a constant propensity to consume, the ratio, f, will rise. In money terms, more investment in capital formation will take place. This will be real if income earners save a larger absolute amount than the earnings surplus increase.

The evidence would indicate that prior to 1952, consumption was at too high a level to permit the existing level of investment along with other demands made on final output, and maintain stable prices. As the differential between wage earnings and wage rates increased, personal savings could revive since a certain minimum living standard for labour had been reached. This was achieved by both rising production within consumer goods industries and a rising share of employment income in final output. Clearly, if personal savings from wages is a constant proportion of labour's income and labour's share rises, the proportion of savings from wages to total output will rise. Further, if a standard of living is reached which satisfies labour (in the aggregate only) so that the proportion of income spent falls, the ratio of income saved to total putput will rise considerably. However, this is only nominal saving - the real savers would be passive income earners whose share of output is falling and who are forced to save (or do without) because of high prices. This appears to be the only logical explanation for the revival of personal savings which was considerable in 1952, for a rising share of employment income in final putput was accompanied by a low level of consumption.

If true, it would represent an upper limit to rising wages and prices, for higher levels of saving would make possible a greater amount of investment which, in turn, would increase production.[1] Thus, the possibility of over-production becomes quite real as a result of over-saving.

1. This explanation is not at all new for it is implicit in Nicholas Kaldor's "A Model of the Trade Cycle", Hansen and Clemence, Readings in Business Cycles and National Income, Allen & Unwin, 1953. This essay was first published in 1940.

Professor Pigou's table on p.116 shows the position of labour in regard to its real wage rates and earnings very well. Rates are about equal to the cost of living so that at some time if the upward trend continues, the propensity to consume must fall. However, even with a relatively high level of saving, the pressure of consumer demand is great enough to permit higher prices, as is shown above (Table XVI.) A still higher level of saving would be required to reduce the inflationary pressure of excess consumption (something in the neighbourhood of £200 million per year) as well as to improve the balance of payments. At the moment, however, it seems that in order to secure a higher level of personal saving, rising prices with a rising share of labour in final output is an essential prerequisite, assuming, of course, that the government does not budget for a surplus.

b. Welfare benefits which further increase personal consumption

It would be helpful to think of the components of demand in the right-hand member of the identity, p.149, as external and internal. This is the demand version of the active and passive distinction used in the supply side. In the numerator, the external claimants of final putput, which are determined by influences outside the domestic economy, are government revenue, the magnitude of which will be determined by political considerations, add exports, determined by the balance of payments situation and the terms of trade. However, the share of exports, while considered absolute, will compete with other forms of consumption so that an increase in internal ratios will reduce the quantity X if the level of putput and the share of government is constant in value. Likewise, an increase in any

consumption ratio can result in a rising value of I, imports, and a consequent deterioration in the balance of payments. There is, therefore, a close relationship between inflation caused by rising wages and prices and the balance of payments. The components of the identity are all mutually determined by way of the value of final output which equals primary input.

A close relationship exists, however, between employment income and personal consumption, c. Obviously, an increase in wages will lead either to higher consumption or to saving; the ratio, c. can only be constant if other consuming sectors increase as much as consumption; otherwise the ratio c will rise, assuming, of course, that external components are constant. The consuming ability of employment income, however, will depend on disposable income (net of income tax), and the government sector will increase relatively as income tax rises and internal consumption ratios fall. Indirect taxation, on the other hand, will increase the absolute share of the government sector by increasing the value of final output with the consumption ratios constant. Income tax, therefore, levied on employment income cannot be inflationary but may reduce the size of final putput by destroying the incentive to produce.

There is, certainly, an equilibrium level of consumption, investment and government demand consistent with price stability and full employment. Personal consumption must be at a level which will just clear the market of consumer goods, investment must be great enough, that is, require a certain amount of final output, to ensure at least a constant or growing supply of consumer goods, and the government share must be sufficient to perform the service of the state. Anything below this

equilibrium level of consumption (that is, overproduction) must result in unemployment and a consequent waste of potential output. With the exception of a coincidence that all income sectors fall equally, changes in income ratios must occur. Ratios of internal consuming sectors will vary inversely as the degree of savings, and, in so far as the propensity to consume is constant, the ratios will not change. This, of course, is the basis for the Keynesian multiplier theory. If absolute consumption rises above this equilibrium level, as a result of a rising active ratio of distribution, and domestic production of consumer goods is inadequate to supply consumer demand, the balance of payments will deteriorate. The absolute level of savings may be greater than absolute investment, but the level of consumption may be too high for the domestic productive capacity at the moment. The result is a "consumption multiplier" which increases the nominal value of final output. Instead of investment determining the level of national income via the investment multiplier, the level of investment is determined by the level of consumption. This is, of course, a dynamic process resulting in rising costs of investment which tend toward equality with savings but which, because of a rising share of employment income and, hence, rising absolute levels of consumption and savings, never reach the nominal value of savings.

This, in essence, is inflation resulting from an increasing share of employment income and a high level of consumption, that is, the wages-prices spiral, and is subject to the checks of reduced consumption of passive incomes.

The situation can be thought of as the attempts of the economy to adjust itself to an equilibrium in which the consumption ratios of income sectors are more nearly in line with the distributive shares. This adjustment is accomplished through rising prices and takes place because of rising wage costs which can be passed on to the consumer at higher prices. Any factor which tends to increase consuming potential, therefore, adds to the inflationary tendency of the economy by altering the equilibrium level of consuming sectors in such a way that the demand for consumer goods is higher than the equilibrium level. The opposite is also true, of course, in that any factor which discourages consumption is anti-inflationary.

In this regard, a major inflationary factor which came into existence during the post-war era is welfare benefits. These encourage consumption by reducing the risk of future uncertainties for the worker since he need no longer save for possible illness or the eventuality of unemployment or provide so much for retirement. But, perhaps more significant, is the actual redistribution of income which takes place as the result of the many benefits received by labour and which consequently materially increases the national consuming power beyond the productive capacity.

In order to determine the quantity, measured in terms of money, of welfare services which accrue to the working class, two necessary assumptions must be made. First, it is assumed that the survey made by the Cost of Living Advisory Committee accurately assessed "... practically all wage earners and most small and medium salary earners" as earning between £150 and £1,000 per year. [2] Though this was qualified by

2. Cmd. 9710

the Committee in its report, it was approximately true. Second, the welfare benefits accruing to workers are those which the worker would have to provide for himself were it not for the State. This excludes the very many benefits which must be provided for the entire community such as roads, police protection, care of the handicapped and homeless, etc. Without these personal benefits now supplied, in many cases, such as medical attention, university education, etc., only the minimum would be provided by the worker since he would overestimate the value of what is now "free", consequently do without.

To calculate these benefits, the number of children in households within the range of incomes £150 - £1,000 was secured from Table 57 of the 98th Report of the Commissioner of Inland Revenue.[3] These were compared with the total number of children to conclude that 93.8% of children are produced by workers. This means that workers derive 93.8% of the benefits such as education, family allowances etc that arise from children. For other benefits such as health services, the population included within the income range £150 - £1,000 was compared with total population to arrive at the conclusion that 85% of the population are workers; hence, 85% of the total of these benefits accrue to this class. National Insurance benefits were "lumped" together, to approximate the value of workers' benefits on the basis of the ratio of workers' contributions plus the contributions by employers on their behalf to total contributions. Housing subsidies, it is assumed, all accrue to workers. Since it is impossible to determine the numbers of the population which are not within the £150 - £1,000 income range who benefit from housing subsidies, this is necessarily inaccurate. There must be many pensioners, etc. who live in

3. Cmd. 9667.

subsidised housing; therefore, the housing subsidy for the workers must be rduced. When compared with the total, however, the amount of reduction is very small.

Table XVll

Value of Welfare Benefits from Incomes £150 - £1,000
(£s million)

	1948	1949	1950	1951	1952	1953	1954
National							
Health Service	155	314	368	362	370	379	391
Housing	56	59	60	63	69	76	84
Education	30	33.8	34.7	32.8	32.9	32.9	35.6
Milk and Welfare Foods	32.8	33.8	32.8	36.6	42.2	45	40.4
National Insurance	205	244	248	264	341	382	390
Family Allowance	58.2	59	60	62	75	101.4	102.3
Local							
Education	207	223	235	272	302	323	357
Health	52.7	38.3	37.4	40.8	45	46.8	47.6
Housing	12	13	13	15	19	22	23
School Meals and Milk	20.6	24.4	24.4	25.3	29.1	28.2	34.7
Grants for University Education	7.5	9.38	12.4	14.06	15.95	17.8	18.5
Totals:	836.2	1051.68	1119.7	1187.56	1341.15	1454.1	1524.1
Index	100	126	134	142	160.5	174	182

The ratios, as explained above, are - .938 for all benefits arising from children.
.85 for other benefits, and
1 for housing subsidies.

The ratios for National Insurance are as follows -

1948: .614; 1949: .645; 1950: .641; 1951: .649; 1952: .720
1953: .727; 1954: .734

Source: Table 57, Cmd. 9667: Tables 37 and 40, National Income and Expenditure, 1955.

Table XVlll.

Direct Tax paid by Wages and Salaries
(£s million)

	1948	1949	1950	1951	1952	1953	1954
Income Tax	421	449	460	560	556	507	567
Surtax	20	222	24	27	28	28	29
National Insurance Contribution	163	207	209	213	222	243	247
Totals	604	678	6693	800	806	778	843
Index	100	112.5	116	113235	134	129	140

Source: Table 43, National Income and Expenditure, 1955.

Surplus for consumption (Total, Table XVll less Total, Table XVlll).

1948	1949	1950	1951	1952	1953	1954
232.8	373.68	426.7	387.56	535.15	676.1	681.1

Allowing for inaccuracies, the surplus available for consumption by workers is considerable. It is, furthermore, growing, having reached 200% over 1948 by 1954. The increase is largely due to the increased cost of benefits, particularly health service, which have risen faster than direct taxes.

As a result of these circumstances, the surplus has been growing much faster than the price level of consumers' goods. The fact that personal saving increased after 1951 is clearly explained since the supply of consumer goods rose by only 12% from 1948 - 1954. Prices would have had to rise much more than they did to have rduced the amount of personal saving.

What is most important is the redistributive action of direct taxation. The cost of welfare services has risen so much

more than direct taxation that redistribution of income in favour of workers is increasing. As surplus on current account and subsidies are reduced, the rise in cost of welfare services is accommodated by a smaller rise in total direct taxation In this way, the system is more redistributive of income than in 1948. Should further economies of government expenditure other than welfare services permit a continuance of this trend, pressure on the supply of consumer goods must continue to grow.

Obviously, what is required is a reduction of total consumer demand by budgeting for a larger surplus on current account. This surplus must come from the £150 - £1,000 income group, that is, the welfare benefits would be paid by those who receive them. Currently, as discussed in Part 1, the direct taxation of other incomes (largely profits, etc.) results in an increase in expected profitability of investment. The incidence of taxation of profits, in other words, is shifted to consumers. In this sense, the worker is paying through inflation for his welfare benefits by higher prices of consumer goods. This shift of incidence is made possible by the growing surplus of consuming potential in the hands of workers; hence, the result is the "consumption multiplier".

The political difficulties involved in higher direct taxation of workers are obvious enough in a nation with a "labour-biased" environment. However, since personal saving is notoriously unreliable and difficult to determine, a more sensible fiscal policy would appear to be a reduction of indirect taxation and in increase in direct taxation. This would, to a large degree, restore the consumption and distribution ratios to a position more nearly approaching equilibrium. Such a measure would have to be designed to produce a <u>net</u> reduction in consuming power, that is, direct

taxation must increase by more than indirect taxation is reduced.

To repeat, it is not a question of reducing absolute quantities of employment income or profits but changing the relationship between them. It is this relationship which, when altered by a redistributive system of taxation and welfare benefits, attempts to restore itself to equilibrium level through rising prices. Under current conditions, the net return to capital (after tax) is remarkable small, calculated by A.M. Thusro at under 1% for long-dated government securities. The net yield on equities has been lower than pre-war.[4] As a result, the total return on investment must be very high to justify the use of capital; hence, rising prices are essential. Redistribution of income has reached the point where it is becoming more and more an inflationary gap.

It would be difficult to determine what degree of redistribution via direct taxation would be coincident with price stability and full employment. This would depend on the level of real saving accomplished by labour. So long as labour benefits from rising prices by an increasing share of real output, there will be no incentive to save. Encouragement by a "savers budget" may offer sufficient incentive to reduce consumption; on the other hand, a safer course would be to reverse the current trend of redistribution so as to reduce the potential consuming surplus to the level of 1948 - 1949, then offer incentives for saving in the hope of securing some price stability along with sufficient investment so as to increase the gross national product in real terms. What is most important, however, is

4. A. Cairncross, "Saving and Investment Since the War", Westminster Bank Review, February, 1955, p.8.

that redistribution of income should not proceed faster than the productive capacity can support. The transition to the Welfare State may be too rapid.

The inflationary effect of indirect taxation has already been discussed. By raising the price level, it acts as a competing active income sector. The effects of rising wage or imports cost are thus heightened in terms of price. The original purpose of the tax as a deterrent to consumption has been forgotten as wage demands are determined by what is considered a living wage inclusive of purchase tax. In this way, the revenue so derived has increased and become as essential part of the taxation system. Labour is in a position as a consumer to shift the real incidence of the purchase tax to other less active incomes in the same way as management can shift the profits tax to the consumer. In effect it is an active defence of real earnings with the rentier class as the least active.

It is, however, again very difficult to determine how much of indirect taxation the worker is willing to accept before action is taken to shift the incidence. If labour is sufficiently passive, it will agree to the reduction of consuming power which the indirect tax involves; if not, the Government will derive the revenue purely from an increased nominal value of final output. This would constitute taxation by inflation and would certainly be unethical, and any tendency in that direction would be a stimulus to inflation.

The indirect tax would be effective as a producer of revenue and an anti-inflationary weapon if it successfully reduced real income and transferred to the government the real consumption foregone by the public. The government could then increase its share of final output to the same extent that the share of personal consumption was reduced. The tax would fail, however, if the

consuming ability did not fall to the same extent as the reduced living standard, or if consuming ability fell and could be regained by a nominal income increase. In this case, the original share of personal consumption would be restored by a higher nominal value of final output and, as suggested above, the government would derive its revenue through this rise in money value. This situation is doomed to be self-defeating, for the real value of the government share of output declines and requires an ever-increasing nominal value to maintain its share. This is clearly a spiral of shares in which indirect taxation plays a major role, to be checked again by passive incomes that lose sufficient income to finance the government expenditure required.

For many less active labour incomes, there is a considerable surplus of consuming power already available through the redistributory effects of direct taxes and welfare ebenfits. These incomes will not decline in real terms until this margin becomes negative. Further, since this margin has been growing, these real incomes will improve if indirect taxation increases at a slower rate. Accordingly, the amount of indirect taxes paid by labour should be determined.

In allocating the amount of tax paid by the working class, the results of the survey made by the Cost of Living Advisory Committee, referred to above, was used. This, presumably, gives a consumption pattern of the income groups within the range £150 - £1,000. From this, the weighting for the new index of retail prices is determined. Using these weights, therefore, the amount of indirect tax paid by this income group can be determined.

TABLE XlX

Indirect tax paid by the income range £150 - £1,000
£s million

Consuming Groups and Weights.		1948	1949	1950	1951	1952	1953	1954
Food	350	-313.5	-289	-260	-255	-170	-128.5	-168.5
Drink	71	192	206	214	226	276	254	268
Tobacco	80	350	368	384	420	444	473	505
Housing	87	73	72.3	78.5	89.3	96.5	105.3	112.3
Household Durable	66	56.2	48.4	52.8	65	61.2	59.5	62.75
Clothing	106	42.3	50.4	49	51.5	38.2	34	36.7
Transport and Vehicles	68	24.3	28	43.5	94	124.6	129.8	140
Miscellaneous	59	57.5	53.1	60.2	67.1	66.7	61.7	61.8
Services	58	26.3	30.6	31.4	33.5	33.1	37.5	38.7
Totals :		508.1	567.8	653.4	791.4	970.3	1026.3	1056.75

Source : Tables 21 and 24, National Income and Expenditure, 1955

Considering the table as a whole, the rising indirect taxes during these years have been due mostly to falling food subsidies, tobacco tax increases, and the rising expenditure on "private motoring and cycling". This has resulted in a 204% increase in nominal tax. If allowance is made for the 25% increases in prices of consumer goods during this period, the real tax would have risen by 63%.

If the surplus of benefits over direct taxes is subtracted from the indirect tax the result should give the net amount of taxes paid by the working class.

	1948	1949	1950	1951	1952	1953	1954
Indirect taxes	508.1	567.8	653.4	791.4	970.3	1026.3	1056.75
Surplus of benefits	232.8	373.68	426.7	387.56	535.15	676.1	681.1
	275.3	194.12	226.7	403.84	445.15	350.2	375.65

This shows an increase of 36.5% from 1948 to 1954 while total gross income from employment increased by 52% during the same period. Clearly, then, rising wages and prices are lightening the burden of taxation as far as the worker is concerned. Not only does the worker benefit from an increased share in relation to passive incomes, but also from the

reduction in the government's share of real output. As long as the benefits rise in value faster than the rise in indirect taxation, labour will continue to improve its position in distribution.

If the above net tax paid by workers is compared with the cash value of wages and salaries, the percentage reduction of income is remarkably small.

1948	1949	1950	1951	1952	1953	1954
4.5%	3%	3.3%	5.3%	5.45%	4.05%	4.05%

The position can be summed up at this stage with the available statistical material. The basic essentials of welfare are supplied to labour to a greater value than the contribution of labour in direct taxes; therefore, these benefits are "subsidized" by other income sectors. Assuming that these basic necessities would be provided for by each income earner himself were it not for the welfare state, the worker increases his income by about 7%. Labour's purchasing power is then reduced by about 11% as a result of indirect taxation from what it would be if prices were lower. The net reduction, therefore, is about 4%, as suggested above.

In terms of final output, labour's pressure of demand will increase the personal consumption ratio so that the other shares will either reduce or maintain their existing ratios by higher prices. In this way only can equilibrium be restored.

Before assessing the inflationary effect of redistribution of income via welfare benefits, due regard must be given to the fact that employment income would probably be higher if the worker had to provide these services himself. Under these circumstances, trade unions would demand higher wages in order to increase the degree of security of real wages. It would be impossible, however, for prices to rise any

higher than under current conditions for the distribution of final output would be more nearly an equilibrium level. The only conceivable way for prices to rise in a spiral inflation would be that labour successfully demands so high a wage that it reduces the share of other incomes. At the moment, the share of profits is reduced by taxation so that labour's share automatically increases; consequently, prices rise as a result of the attempted restoration of the equilibrium share.

The situation is, in effect, a subsidy of labour which, though it may reduce absolute wage levels, changes the share of income sectors If it were possible to redistribute income in such a way that the income losers would gain through reduced pressure of wage demands, the subsidy of labour would be "economically sound." It would be similar to the food subsidy in that a shift of income from a sector of the economy which contributes the larger share of output to another, agriculture, results in a considerable reduction in the cost of living. Profits, as "other incomes", must gain absolutely at least a measure of what it loses in share of output. If the absolute gain is less than the loss of share, prices will rise as profit margins increase, that is, profits of security compensate for the reduction in share.

Again, the crux of the matter is the ratio of distribution, for the fact that wages rise in money value does not necessarily constitute an inflationary pressure. For an analysis of the effects of redistribution and welfare benefits, incomes will be divided among employment, gross profits less dividends, etc., and rent, dividends, and interest. These incomes will be considered as a percentage of total output before and after direct tax. The ratio of employment before tax to total output

is the same as that in Table IX, page 73 . The remaining sectors are a breakdown of profits and passive incomes.

Table XX.

Ratios of income sectors to final output before direct tax, (including stock appreciation).

	1948	1949	1950	1951	1952	1953	1954
Employment income	.485	.483	.48	.457	.47	.475	.483
Gross profits less dividends, etc.	.071	.0765	.072	.075	.086	.0875	.085
Other Incomes *	.181	.1785	.17	.152	.16	.1595	.156

* Self-employment, rents, dividends and interests.

Source: Tables 1, 3, and 8: National Income and Expenditure, 1955.

Ratios of income sectors to final output after direct tax plus welfare benefits (including stock appreciation).

	1948	1949	1950	1951	1952	1953	1954
Employment Income	.503	.508	.507	.478	.50	.51	.515
Gross Profits less dividends, etc.	.0293	.0315	.0232	.0366	.0353	.04	.042
Other incomes	.155	.1565	.149	.132	.141	.1413	.139

Ratios of personal income sectors after direct and indirect taxes on personal consumption, plus welfare benefits.

	1948	1949	1950	1951	1952	1953	1954
Employment Income	.465	.47	.465	.435	.448	.458	.465
Other Incomes	.097	.107	.101	.0913	.107	.1065	.1065

Source : Tables 1, 3 and 8, National Income and Expenditure, 1955

Thus, the change of distributive shares is considerable. Gross profits less dividends loses on an average 50% of its ratio through direct taxation, and other incomes about 60% by direct plus indirect taxation and benefits. Employment income, however, loses only about 3%.

The effect of this change of shares on the national consumption

pattern must be considerable. Since employment income will be used largely for direct personal consumption, the production of the economy must be heavily biased toward consumer goods. Should the productive capacity be unable to support this demand, the surplus demand will spill over into the exports share with the consequence of a balance of payments difficulty. The demand for capital investment for further production of consumer goods must be great, but the difficulty will be a shortage of real capital since the working class tends to be a poor saving group. This constitutes the departure from the position in which the relationships of consuming sectors (exports, personal consumption, investment, and government) would ordinarily be under equilibrium conditions.

It is practically impossible to determine what this eqilibrium distribution would be since it depends on the productive capacity of industry at a particular time. This will depend on the nature of investment, for as capital grows more scarce, it must be applied to its most efficient use. With the rapid development of new techniques of innovation, it may well be true that a stage will be reached where the return to marginal investment will rise. This would represent increasing returns to capital, and would eventually make possible the efficient production of consumer goods in sufficient quantity to satisfy domestic demand plus a confortable export share. Again, automation will surely play a decisive role in increasing the efficiency of capital. Equilibrium, therefore, could be restored.

Currently, the demand for personal consumer goods is much too high. The indirect tax from all appearances has not encouraged sufficient saving (or "lacking") for other consuming sectors to meet their requirements with stable prices. This is evidenced by the comparison of real wage rates with pre-war (above, p. 116). Labour

the greatest consuming sector, has maintained its purchasing power in terms of rates and has increased it by 20% in terms of earnings. This must result in an enormously increased personal consuming potential as both incentive payments and income redistribution by taxation and welfare benefits combine.

To repeat, until such time as the productive capacity of capital investment has reached the stage where equilibrium of consuming shares can be achieved at the current rate of income redistribution, total demand must be checked. This can only be done at the moment by means of a direct income tax which cannot be shifted by any income sector.[5] The economy that is so heavily consumer biased must be inflationary as long as productive capacity is insufficient to sustain it. In short, the welfare concepts as put into practice since the war are well in advance of the ability of the nation to maintain them.

5. The possibility of an expenditure tax forming the major part of government revenue in the future, is an interesting one. Mr Kaldor has suggested, in a recent publication, a tax which would be sharply progressive on the total amount spent. This would encourage personal saving and discourage spending out of capital. It is conceivable that such a measure could check consumption and inflation if the tax could not be shifted by labour through rising wages. Since the largest share of personal consumption is from wages, this, it appears, is a prime requisite for stability of the value of the pound. -- From a review of Nicholas Kaldor's An Expenditure Tax, Allen and Unwin, by Sir Arnold Plant in The Listener, December 15, 1955.

CHAPTER 10

INVESTMENT SHARE OF FINAL OUTPUT

It has been suggested above (p. 126) that a certain level of personal savings is commensurate with a given level of prices and wages. If to personal savings are added other savings by corporations, total savings must equal total investment for stability of prices. If ex ante savings fall short of ex ante investment, prices will rise until the ex post quantities are equal. This, of course, is the principle of the investment multiplier and is well known. During full employment, however, as suggested in the preceding chapter, the emphasis shifts to consumption since the potential consuming power is greater than domestic productive capacity. This is the "consumption multiplier" and will increase the price level until production of consumer goods equals the demand for them. The stimulus for investment, therefore, is the continued surplus of consumer demand which, if unsatisfied, will increase the price level according to the equation of demand (p. 149). This rise in prices will continue until saving is of sufficient level (that is, aggregate consumption is reduced) that consumer productive capacity can satisfy the demand without reducing exports. Table XV, p. 150, shows falling consumer demand along with rising investment in fixed capital equipment, accompanied, of course, by continuously rising prices.

a. Savings and investment.

In theory, capital accumulation in conditions of full employment is a logical extension of Keynesian and neo-Keynesian principles of the trade cycle. Savings ex ante must equal investment ex ante for conditions of equilibrium to exist. Failure to accomplish this equality results in income shifts via the multiplier and acceleration principle. This is the fundamental of modern "capital stock adjustment theories which predominate in current thinking ... "[1] Cyclical movements arise from the fact that the capital investment necessary to sustain full employment during a boom results in an over-accumulation of stocks and an inevitable decline in the rate of investment. The level of employment that would be sustained by just sufficient investment to maintain the economy on a constant equilibrium basis would be less than full. Therefore, a full employment investment level must allow for steady growth; hence, net investment must be positive rather than zero as would be the case if the economy were static.

As a result of investment coefficients, cyclical effects occur which may be convergent or explosive, depending on the values. The cyclical movements are caused by "induced investment" which is the heart of the acceleration principle. "Autonomous investment", on the other hand, serves to administer to the entire system the shocks which initiate, through "induced investment", cycles of capital adjustment. Early theory had assumed that these cycles were convergent at an equilibrium level, but later developments, largely based on J.R. Hicks, stress the explosive nature of the cycles with the existence of "ceilings" and "floors" which prevent the explosion from occurring.[2]

1. R.C.O. Mathews, "Capital Stock Adjustment Theories", Post-Keynesian Economics, Allen & Unwin, Ltd., 1955, page 172.

2. For a discussion of the validity of the two assumptions, see J.R. Hicks, A Contribution to the Theory of the Trade Cycle, Oxford, 1950, pp, 89 - 91.

The cyclical movement itself, however, is beyond the subject of the thesis, but the concepts of the ceiling and autonomous investment are most important.

Briefly, the "ceiling" represents the limits of expansion of industry through investment. Real investment has reached its maximum when all unemployed resources have been utilized. Under ordinary circumstances, forces should come to play that would precipitate a down-turn, but under existing post-war conditions these forces are rendered ineffective so that the ceiling is penetrated and prices and wages rise.

Hicks based his argument for the existence of a ceiling largely on the "relative shortage of investment goods so that prices of investment goods are tending to rise even while those of consumption goods remain fairly steady."[3] As a consequence, investment tends to be postponed since bottlenecks appear with full employment and output can no longer expand. Through the accelerator, the output of investment goods is curtailed and, eventually, all output is restricted. Time lags also appear on the final stages of the boom so that wages will require an adjustment period during which boom conditions will not have sufficient time to perpetuate themselves.

Broadly, the situation facing Britain after the war was one of replacement of capital lost, and, at the same time, competition with other nations that suffered less from the war. Prior to the war, Britain had been investing some 5% of the national income annually so that, compared with other nations, Britain was already in an unfortunate position. [4] Paish estimates capital lost during the war

3. Ibid, p. 134

4. F.N. Paish, The Post-War Financial Problem, Macmillan & Co.Ltd. 1950, p. 53.

to be about 20% of the total owned in 1939. Using 1948 prices, he puts the total at £9,000 millions inclusive of enemy action, wear and tear, and loss of overseas investments. Now, re-investment can accomplish a double purpose in that more modern and efficient techniques are available to the nation that finds it necessary to rebuild and re-organise. No doubt, this has been an important fact in Germany's high productivity since the early reconstruction years. In Britain, however, new capital investment has been in a large measure an extension of old, less efficient productive capacity. The British people, apparently, were unwilling to undergo the hardships of saving in order that new investment could replace the old. Demand was at such a high level that necessary savings were not forthcoming; the result was that foreign assistance, particularly from America, made up the difference. The shortfall of savings averaged £95 million from 1946 to 1951, which was bridged by £120 million of foreign assistance per year.[5] Since 1951 a greater emphasis on production for export, coincident with an increase in personal saving, has virtually eliminated the imports excess. To a large measure, then, personal savings represent the difference between savings ex ante and planned investment. Rising prices without rising incomes means that certain individuals are forced to cut expenditure with the result that, in the aggregate, saving takes place until it equals investment.

The inflationary implication of this situation at once becomes obvious. Suppose that incomes do rise, say as the result of wage agreements tied to a retail price index, as fast or almost as fast, as prices. Forced savings will not take place and investment must be cut

5. N. Macrae, The London Capital Market, Staples Press Ltd., 1954, p.27.

to avoid rising prices and an export-import gap. On the other hand, if full employment is to be maintained, investment must be continued, and if sufficient voluntary saving and/or no budget surplus exists, prices must rise so as to force personal saving to a level high enough to close any gap between exports and imports. Thus, what may be called an investment-savings "spiral" is complete. If all conditions are met, viz. little or no personal savings, full employment, a high rate of investment and no export-import gap, prices must rise.

The question may be raised as to the necessity of forced personal savings. In the past, there has been an inequality of income to such an extent that a saving class of people could be more or less defined. The post-war leveling of incomes, however, has taken place to such an extent that "... if all incomes over £4,000 a year net were completely confiscated, this confiscation would bring in the Exchequer considerably less than the revenue needed to cut even 1d per pint off the tax on beer".[6] Now the structure of British income tax is well-known and need not be presented here. What is most vital, of course, is the fact that personal savings are growing in importance, yet the ability to save in the aggregate is growing smaller. If the leveling of incomes is socially acceptable, then a substitute for ex ante personal savings must be found. If personal savings prove to be inadequate, the Exchequer must budget for a surplus.

An interesting study was made by Saunders of personal investment and presented in the form of a paper to the Manchester Statistical Society.[7] He calculated the total savings for Persons in the form of

6. Ibid, page 41

7. The Economist, "The Missing £500 million", Nov. 20th, 1954, p.661

fixed capital formation, financial assets, life insurance, pension schemes, and bank deposits. These were identified payments and, of course, did not include all forms of saving. The total for 1946 - 1951 was enormous and exceeded the "net funds available for investment" by, on an average, £500 million. Therefore, unidentified "dis-saving" equaled this amount. The outstanding feature is the disappearance of this large dis-saving in 1952 and 1953 to such an extent that a difference of only £28 million and £64 million existed. The National Income accounts record this as an increase in personal savings of some 197%.

Doubtless, there is a psychological influence of returned confidence in currency reflected in this unusual increase. However, the underlying picture should not be obscured, for there was a steadily falling ratio of consumers' expenditure to gross national product throughout the post-war years.

Table XXl.

Percentage of consumers' expenditure of gross national product.

1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
82	85	82	80	80	78	76	75	75.3	76.2

Percentage of personal savings of gross national product.

1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
2.8	1.1	.6	.8	.8	1.8	5.1	5.8	6.13	6.13

Index of gross national product at 1948 market prices.

1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
96	96.5	100	103.7	106.1	110.2	109.9	113.9	118.9	--

Source: National Income and Expenditure, 1955

A glance at these percentages is sufficient to indicate the return of confidence along with the increase in the gross national product which provided greater scope for investment and consumption.

Any conclusions drawn from the above must be considered tentative since no precise statistics are available regarding personal savings. National income accounting has, unfortunately, treated these as a mere residual necessary to balance investment. But a picture, though hazy, does emerge. In some sectors of the economy there were "spendthrifts" whose incomes were being spent faster than they were earned during the years 1946 - 1951. Hire purchase, credit, etc. were insufficient to account for all of this so that some past accumulations were used for purchases. High demand must have contributed to high prices and profits among some industries. Inflationary pressure, therefore, was being felt as a result of a high propensity to consume the products of these industries. Sufficient savings were not forthcoming within certain consuming sectors to equal the heavy autonomous investment of the early post-war era.

The Economist's profits analysis for this particular period substantiates this conclusion. Profits declined considerably with the onset of saving. The decline, however, was heavier among the consumer goods industries while the capital goods industries in most cases maintained or increased their earnings. There are, of course, other factors affecting profit levels coincident with the saving increase. Raw material prices had declined with the result that previous stocks were over-valued, but the broad picture emerges of a change to a more normal consumer demand with accompanying savings. Profits returned in 1953 to a more stable level after the slump during 1952.[8]

8. For a full discussion with figures and graphs showing profits changes during these years, see The Economist, January 29, 1953, page 226, and January 24, 1954, page 249.

b. Induced and autonomous investment.

In so far as capital investment is induced, it results from the action of the consumption multiplier. Since demand for consumer goods is high, the demand for the means to supply these goods will also be high, if not considerably higher. This, of course, is the well-known accelerator in trade-cycle theories. This leads inevitably to demand for labour in capital goods producing industries and a consequent competition for a limited labour supply during full employment. In this way, the spiral can be "self-generating" if the demand for consumer goods (or insufficient savings) is great enough to encourage induced investment which, in turn, stimulates further consumer demand. The only possible way for the demand for labour to be reduced would be for the new induced investment to be so completely labour-saving that redundancy of labour should occur from the abandonment of the old techniques. This is unlikely unless technological progress proceeds faster than is anticipated. A shift of labour would be more likely to occur as demand for new skills, etc. accompanies an introduction of more automatic methods of production. In reality, labour could be more effectively applied, that is, output per man-hour increased, so as to supply the consumer goods now demanded by a high propensity to consume. This would not amount to redundancy of labour, however, except for certain types which have been displaced by new techniques of production.

If this is true, that is, induced investment is supplying sufficient demand for labour, so that this, plus "redistributed demand", plus the wage demands of trade unions which attempt to increase their share of the national product, exceeds productive capacity, a self-generating spiral of prices and wages emerges. One of these demand factors must relax if the process is to come to an end. Induced

investment will cease when capital equipment becomes redundant The scarcity of labour will result in unutilized capacity and a loss of profits will result. This must be the ultimate end of a self-generating spiral of demand, for, unless changes in productive techniques occur sufficiently fast, a point will be reached where further investment is uneconomic. This will result in a cut-back in production of investment goods and demand will slacken unless autonomous investment from the government is forthcoming.

It is difficult to distinguish between autonomous and induced investment during the post-war era, for, doubtless, all investment, including road, railways, etc.,in nationalized industries is directed toward the greater supply of consumer goods and services. However, long-term investment in the public sector has been considerable since the war. Housing (new dwellings) has averaged about 20%, Gas, electricity and water about 10%, Transport and Communications another 10% and all Manufacturing 20 or 25% of total investment in fixed capital. Manufacturing, however, contributes about 40% of "total production and trade", Transport and Communications about 9%, Gas, electricity and water about 3%, and Building and Contracting about 7%. This would suggest that post-war investment has been rather high in the basic industries which are heavy capital users. This would represent "autonomous" investment in the sense that it does not arise solely from the excess consumer demand. Further, since this investment will be long-term, it will eventually decline except for nominal maintenance costs. Depreciation in Manufacturing, however, must be high; consequently, a steady flow of capital must be available. This would be induced investment since it will rise or fall in response to consumer demand for manufactured goods.

In terms of final output, f (the fixed capital ratio) is probably higher than it will be once the deficiencies of basic investment are made good. These deficiencies, the legacies of the war, estimated at £9,000 million at 1948 prices, would be replaced in about eleven years, assuming that depreciation is about 7% of gross national product.[9] One could, therefore, conclude that from 1955 or 1954, the rate of increase of heavy autonomous investment should decline, to be replaced by higher investment in Plant and Machinery.[10] This is not to suggest, however, that long-term autonomous investment will cease in the near future; rather, one can expect continued investment along these lines for some time to come as the needs of the economy grow. The war has exerted a powerful stimulus to economic growth as a result of the changed ethical-welfare standards which lie at the root of income redistribution, and the advantages of the wartime labour shortages which have accrued to trade unions will not be readily given up. As a result of the heavy demands made upon the productive capacity, long-term autonomous investment must continue for some time, but the relationship between induced and autonomous investment will shift in favour of the former.

c. Fruition periods of autonomous investment.

The value of total final output in real terms will, of course, increase as the result of investments which increase output per man-hour.

9. This figure was assumed by Cairncross to be an approximation of depreciation. He then calculates "net" investment for the years 1947 - 1953, which were, on the average, about 9% per year. A. Cairncross, op. cit.

10. The Economic Survey for 1956 records a fall in new housing for 1955, the first since 1950, and a considerable rise in Plant and Machinery.

Fundamental to these "labour-saving" innovations is the application of natural power which will greatly enhance the effectiveness of human labour. This does not suggest redundancy of labour until such time as production becomes so great that demand is exceeded - a doubtful point since the standard of living probably will never arrive at the stage of being too high. Redundant capital equipment is a greater danger, especially if investment exceeds the rate of technological progress, with the shortage of labour. It is, therefore, essential that long-term investment in basic industries proceed at a sufficient rate so that production in these industries can accommodate the induced investment which arises in response to the higher consumer demand; otherwise, bottle-necks will appear as a result of shortages of basic materials and services.

Fundamental to these investments is the time lag between the actual inception of the investment programme and the beginning of its contribution to the production process. This "fruition period" will vary considerably in length depending on the nature of investment and the decisions of entrepreneurs. Since there are as many separate decisions as there are industries, any comprehensive study would require years of skilled work; however, an attempt will be made here to arrive at a few general conclusions regarding three major industries from the meagre sources of information that are available.

First, a few general principles regarding fruition periods should be agreed upon. It is at once intuitively obvious that, during times of post-war reconstruction, capital expenditure should take the form which has the shortest possible gestation period. The inflationary effect of the investment multiplier can be largely nullified by increased production if it appears soon enough. Suppose, for instance, that the time required for the multiplier to have its

full effect exactly equals the fruition time for capital. If the increase in quantity of consumer goods equals the propensity to consume from the new income, no rise in prices will occur. In actual practice such a remarkable coincidence would be impossible, but it does serve the purpose of illustration.[11] Should the fruition period of investment be less than the multiplier period, the effect on prices would be deflationary. Thus, with a backlog of past savings, post-war inflationary trends could be partially countered by investment promising quick returns. The opposite, of course, is true for conditions of threatened slump. Longer fruition periods than multiplier periods will encourage rising prices with the result of stimulating induced investment through the accelerator.

1. Steel.

The steel industry will serve as a first example of the above. Immediately after the war, a long-term investment programme, known as a "five year plan", was inaugurated. To attempt to differentiate between autonomous and induced investment in this particular case is very difficult; in fact, it hardly makes any difference, for the demand for steel was so great that returns on investments were assured. The insufficiency of supply of steel resulted in serious bottlenecks at various times. However, the steel industry is aware of investment returns when it does invest, and, in this sense, investment can be considered "induced". [12]

11. For a detailed mathematical treatment of this subject, see S.C. Tsiang, "Rehabilitation of Time Dimension of Investment in Macrodynamic Analysis", Economica, Vol. 16, pp. 204 - 217.

12. Andrews and Brunner, Capital Development in Steel, Oxford, 1951, p. 264, concluded that a 20% return on capital invested would be the minimum required before any project could be undertaken. Some projects, with a relatively short "life expectancy" would require more, as high as 50%. E.T. Sara of United Steel states in the "Financial Times, Feb.28,1955, that a 10% earnings would be the minimum. Apparently, some sort of minimum does exist!

Now the first five year plan was so designed as to stagger investment throughout the period so that results would be noticed as soon as possible. In some cases extensions to existing capacity were made with the object of quick results. In others, new blast furnaces were constructed which required as high as four years to complete. Consequently, it is quite difficult to determine fruition periods for steel investment as a whole, but a kind of average period does, roughly, emerge.

An examination of the annual figures below shows that the greatest increase in productivity occurred during the first two years following the greatest increase in investment. Thereafter, the percentage increase in productivity varies directly with the increase or decrease in marginal investment of the preceding year. A fruition period of between one and two years seems to appear.

Investment and productivity in Steel

Year	Output per head	Percentage increase	Expenditure at 1952 prices (£s million)	Marginal percentage increase
1945	108			
1946	115	6.5	9.3	
1947	114.5	- .8	50.2	440
1948	128	12	58.5	16
1949	133	3.5	71.7	23
1950	138	4.5	76.0	6
1951	141	1.8	70.9	- 6
1952	141	2.5	65	- 8
1953	145.5	3		
1954	151.5	4		

Source : "The First Steel Development Plan", B. I. S. F., November,1952.

Of course, productivity is by no means the whole story. It may, indeed, be more worthwhile to refrain from investing if capital equipment is so high in cost that the expected returns will not justify its use. The steel industry has faced increasing cost of capital

equipment since the beginning of its Development Plan. An index of these costs, furnished by the B. I. S. F., shows enormous increases, as high as 100% between 1945 and 1952.

(1938 = 100)	1945	1946	1947	1948	1949	1950	1951	1952
Capital Expenditure Index	165	180	200	230	235	250	295	335
Wholesale Price Index	135.7	150.4	159.2	169.4	181.5	187.5	210.8	254.2

Source: Annual Abstract of Statistics for 1954

These rising capital equipment costs, along with rising labour costs, etc., have forced the industry to seek higher prices in spite of attempts to keep prices down on the part of the government. Since steel products represent further capital expenditure for other industries, the result is an investment cost spiral which generates further income via the investment multiplier.[13]

It would seem, therefore, that a rising level of personal savings would be necessary to offset the rising costs of capital expenditure. Such a level of saving was not forthcoming during the years immediately following the war. The result was a demand inflation with an inflationary ap between savings and consumption.

13. Andrews and Brunner, op. cit., point out that the rising costs of capital equipment since the war and a system of taxation based on original costs have forced steel companies "as well as other businesses" to the capital market for funds to "keep up with itself" in the modern, highly competitive world. This is, in addition, to actual autonomous expansion. The implication for inflationary tendencies of this situation is obvious when a general shortage of risk capital exists, especially when nationalised industries are heavy borrowers promising safe investments for savings. Private industry must offer more attractive returns in order to compete with nationalized industry; hence, a money market spiral of competition is generated. Page, 312.

2. Electricity.

The situation existing in the electricity industry confirms the above conclusion. A shortage of generating capacity during the winter, and at peak consumption periods, has been a perpetual stimulus for capital expenditure to increase production. Rising capital costs as against relatively constant prices have also caused a "profits squeeze" and have forced the Authority to rely on the issues of stock which were approaching the statutory maximum by 1953. The effect of this action has been to draw capital from the more risky investments to the safe, guaranteed stock of the nationalised industry. The problem of where future risk capital is to come from remains one of the most difficult. Private corporations are forced to rely on their limited savings for expansion purposes.

The Authority uses the Board of Trade indices for arriving at capital contract costs. Among these indices the most important is the Building and Civil Engineering Index, which had increased by one third from 1948 to 1952.[14] Other indices, the iron and steel and wage index for adult male engineering workers, had also substantially increased during these years. Rising interest rates also have added to the cost of capital. The result of course, is considerably higher costs for capital equipment as well as operating charges. The multiplier effects in money terms, therefore, have been steadily increasing.

A considerable proportion of increased costs has been absorbed by increased efficiency of operation, but some tariff increases have been made. Tariff charges, however, in 1952 - 1953, were only 24.9% above the pre-war average, a remarkable achievement. An important factor in operating costs is, apparently, load-spreading. Sufficient generating capacity to meet peak loads must be more fully

14. B. E. A. Report and Accounts, 1952 - 1953.

utilized during the off-hours so that costs per unit may be reduced.

Construction of new power stations is a rather long complicated process requiring careful co-ordination and timing. Delays can easily occur at one stage of building that can interrupt the entire schedule. Apparently, the installation of boilers is the strategic phase of power plant construction and this requires from fifteen months to two years depending on the size.[15] Bottlenecks of raw material can upset the entire schedule by causing delays in boiler installation, Hence, the fruition period of investment varies considerably depending on the state of economy as a whole. At any rate, the period does tend to be exceedingly long, in excess, at least, of the fifteen months to two years required for the boilers alone.

On the other hand, the B.E.A.,in order to meet future requirements of industry, must finance its investment by further issues of stock. The statutory limits to borrowing were increased from £700 million to £1,400 million in June, 1954. During the period 1948 to 1954, borrowing amounted to 70% (£594 million) of finance required by investment. This figure will be increased according to current planning to £1,494 million by 1960. Again,this "new money" represents 70% of investment finance.[16]

It is clear, then, that the investment multiplier of electricity development will be exerting constant pressure on the economy for some time to come. An industry so fundamental to national

15. B. E. A., Report and Accounts, 1953 - 1954, p. 27

16. Ibid, page 13.

production must grow and develop, yet the fruits of the investment in the form of increased supply of consumer goods are inevitably long in coming.

3. Coal.

A third example of heavy investment programmes since the war is the coal industry. Indeed,there is probably no single industry which has provoked more controversy than coal, for the results of capital expenditure here have been most disappointing. The National Coal Board distinguishes between two types of investment projects - short-term and long-term. While this distinction is at best artificial, it does serve, for example, to differentiate between the sinking of new pits which requires many years of construction, and the application of machinery and improved techniques to those pits already in existence. Without quoting figures, the contents of which are well known, output per man per year by 1953 had not yet reached the highest pre-war figure. Output per man-shift has exceeded the pre-war peak by only 3.6%. Considering the growing demands of industry, these are poor results to show for the capital expended in short term development.

Regardless of the reasons (or excuses) for the failure of output to respond to further investment, the National Coal Board has been heavily criticized.[17] Chief among these criticisms

17. A number of reasons have been given, among them being
    1. the growing difficulty of natural conditions,
    2. the discouraging of individual effort by machinery,
    3. wages being "too easy to get", etc.
    Haynes, Nationalization in Practice, Bailey Bros., London, 1953, pp. 368, 369.

is the lack of proper planning of investment. Had the emphasis been placed on new pits rather than short-term projects, the results may have been more favourable in the long run. The Bolsover Colliery scheme has demonstrated the results of wise planning and has also shown that labour relations are of great importance in coal mining. At any rate, the Coal Board has been forced to pay high wages to maintain even a shrinking labour staff so that wages have little or no connection with productivity.

The most important criticism which may be directed to the Coal Board and the policy of the government is the failure to recognize that sufficient coal supplies are not and cannot be forthcoming at the current price level. The deliberate policy of keeping coal prices below the level which demand and supply would ordinarily dictate has encouraged inefficiency on the part of users. Improved techniques of utilisation doubtless could bring enormous savings in coal stocks if it were made worthwhile. High profits could add to the long-term development of new pits, thus eventually making greater supplies available. The Board already has a long-term pricing policy, suggested by the Nationalization Act, to equate costs and revenues over the years, but it is the failure to apply this principle in the short-term that is at fault.

Now the arguments for low coal prices is that heavy industrial coal users are able to keep prices lower than they could if costs were high. A coal price increase would generate a greater inflationary spiral of prices and wages than has already been known. There is, however, grounds for arguing the contrary, that more realistic coal costs would have quite the opposite effect. In the first place, a "shortage" of any commodity is an artificial

concept which is deliberately created by a refusal to permit the price mechanism to operate freely. As a result, a distortion of the economy takes place so that the low fuel costs are compensated for by releasing funds for other purposes such as wages or other means of production. In any case, wage-costs will rise in investment industries even if other industries devote their excess funds to investment in labour-saving machinery. Demand for labour, then, is artificially stimulated until a labour "shortage" occurs with consequent inflated wages.

Secondly, and this follows from the first, an artificial ceiling (Hicks' use of the term) is created which sets the physical limit to increased productivity. Coal, the fundamental basis of power, being limited in supply, determines the degree of effectiveness of human labour. In fact, a scale of productivity and standard of living can be set up to show the intimate correlation between them and the amount of natural power available to labour.[18] In the long run, then, it is the most efficient utilization of a scarce economic resource that determines the productivity level of any country, that is, until the happy day arrives which brings unlimited nuclear energy.

The recent increase in coal prices can be criticized as being far too late. There will be a degree of "upsetting" of industrial planning, which is unfortunate and furnishes grounds

18. An interesting comparison of western nations with the more backward countries on the basis of power utilization has been made by J. Boronowski in a recent edition of the Observer, July, 17, 1955.

for legitimate complaint on the part of industry. A certain amount of re-adjustment will have to take place, but the results in the end will, perhaps, justify the act.[19]

d. Conclusion.

Regarding induced investment, the fruition periods are impossible to measure. Generally speaking, the entrepreneur will consider a number of factors before deciding to invest in response to high demand. He will be concerned with the expected depreciation and obsolescence of a labour-saving machine as well as the anticipated state of the market for his products. Any innovation made must yield sufficient returns to pay for itself in terms of labour saved plus a margin for profit before its expected life is exhausted or it becomes obsolete. With the pressure of rising wage costs, the entrepreneur will see his profit margin narrowing; hence his decision to innovate will be influenced by these factors in addition to the time required for the fruition period. If the demand for his products is certain over a reasonably long period, it will be to his advantage to invest in innovations with a longer time lag, for, as wage costs rise, the possibility of an innovation paying for itself in a shorter time period makes the investment more attractive.

19. The possibilities of more efficient use of coal for domestic heating purposes is discussed by E.D. Simon. He quotes Oscar Faber, President of the Institute of Heating and Ventilating Engineers for the following figures :

Country	Therms per house
Great Britain	1500
U.S.A.	1710
Germany	880

"The climate in Germany is far colder than in Britain; they heat their house, including their bedrooms to a higher temperature, and yet they use only 60% of the amount of fuel used in Britain for each house". The disadvantages of the open coal fire are so great, according to Faber that Britain could save twenty million tons of coal annually and help to"abolish the smoke nuisance". Rebuilding Britain, a Twenty Year Plan, Gollancz, Ltd., London, pp. 100 - 102.

Considering the strength of the post-war pressure of consumer demand, and the accompanying possibility of security profits, there is very little reason to believe that the entrepreneur should refrain from investing in innovations requiring long fruition periods. As long as wages rise in a labour-biased economic environment, there should be no slackening of demand unless government intervention in the form of hire purchase restrictions, etc. is deliberately imposed. One should expect, therefore, increasing investment in plant and machinery. Moreover, since the current credit squeeze reduces the interest-sensitive long-term investment in housing and the public sector, this will release a share of final output for induced investment with a shorter time lag which will increase production of consumer goods.[20] In order for capital to be immobilized in the form of fixed investment, it must guarantee a return which will be great enough to pay for obsolescence and depreciation, and which will yield a return for the capital involved over the entire period, that is, the expected life of the investment plus the fruition period. It will be impossible to predict the state of market demand for most consumer goods many years in advance; hence the fruition period must be short.

In view of the current rapid rate of technological progress leading to automation with its enormous potentialities, the possibilities of a self-generating spiral of demand resulting from induced investment only must be rather remote. It would appear that the real value of final output should increase in the future at least

20. For many small manufacturing industries fixed capital investment is not as important to production as heavy industry. These "factory trades" must rely on overtime, etc. to increase output.

as fast as wage costs rise. This would permit constant distributive shares as profits of innovations maintain the profits ratio. However, if bottlenecks are not to appear in the future with rising consumption, sufficient "autonomous" long-term investment must receive a substantial share of final output. This must result in rising prices if the real value of output fails to rise.

The current high rate of autonomous investment will undoubtedly decline, since its life expectancy is long. The prospects, therefore, of increased productivity and stable prices will improve as more resources become available for induced investment with short fruition periods. The high rate of long-term capital accumulation since the war must have contributed greatly to inflation and the wages-prices spiral by decreasing the amount of final output available for consumption. This, of course, was essential in order to replace wartime losses.

The result was that the economy could not support the rising levels of both consumer and investment demand along with the government and export share. Since post-war investment was necessary and the general public unwilling to restrict consumption (and the government unwilling to tax sufficiently to accrue a surplus) rising prices were the inevitable result. Since labour was the productive factor in scarce supply, wage costs rose and demand was strong enough to permit profits to remain intact. In this regard, sufficient wage restraint on the part of trade unions would have checked both consumer demand and the rising wage costs sufficiently to permit the results of investment to appear after the appropriate fruition period.

The fact that costs of long-term capital investment have risen faster than fruition periods means that the share of output for fixed capital investment increases in relation to other consuming sectors. This contributes to the fall in the personal consumption ratio in the demand equation (p. 149) and simply shows that prices of consumer goods have risen less than fixed capital costs. Since, however, wage costs are a larger proportion of capital costs than they are of costs of consumer goods (see p. 69) these will closely reflect wage increases within the industry. Thus, a nation-wide round of wage demands of equal percentage value will result in a greater cost of capital goods than of consumer goods. This will increase the share of labour in the aggregate from the supply side and decrease the share of personal consumption from the demand side. Of itself this would retard the expansion of industry unless prices of consumer goods could rise sufficiently to offset the rising cost of capital equipment. Under ordinary circumstances, the inflation would come to an end, but since consumption from wages is high, price increases will be readily accepted by the largest part of the consuming public. In this way, of course, labour, an active income sector gains a greater share of final output.

CHAPTER 11.

THE EXTERNAL SHARING OF FINAL OUTPUT

a. Exports.

At the beginning of this part, p 149 , the equation of distribution was set equal to the consumption equation to form an identity,

$$N = \frac{Y + I}{1 - (e + c + t)} \quad \frac{G + X}{1 - (c + f + s)}$$

The discussion of the two preceding chapters has been concerned with the "internal" ratios of consumption which form the denominator of the right-hand member. The numerator, or "external" quantities, will now be briefly considered.

The importance of exports to the British economy need not be emphasized for it is this sector that suffers most as a result of the wages-prices spiral. Excess domestic consumption can either reduce the quantity of exports in money terms, that is, they become mutually exclusive, or what is more likely, the value of final output will rise as distributive shares increase. This will spread throughout the economy, including the export sector, and the value of exports will rise. If the elasticity of demand for British exports is equal to or less than unity, no difficulty need arise, for the terms of trade will improve more than the quantity of exports, falls. However, if the elasticity of demand is greater than unity, a loss of export markets, with a corresponding deterioration in the balance of payments, can result. Post-war competition in the international sphere suggests that this is likely to be true. The left-hand member of the identity will also be changed and very likely will be the original cause of higher consumption, for the ratios of distribution will change as prices rise if imports costs and passive incomes are constant.

Suppose now that an "export drive" occurs designed to cultivate new markets abroad and increase the physical volume of exports. The terms of trade will be assumed constant. The value of X, of course, will rise. The success of the drive will depend on the value of the internal consumption ratios, for if they fall or rise less than the value of X, exports will exceed imports and the balance of payments will improve. Should the consumption ratios remain the same, the value of imports, I, must increase to supply the physical requirements of the increased production necessary. If production does not increase or increases less than the new demand (higher exports volume plus constant consumption ratios) imports again will increase, particularly of goods for personal consumption. Were it possible to restrict imports by tariffs or quotas, the surplus domestic demand for consumption would first reduce stocks (the ratio s), then force a rise in prices as production costs rise in order to replenish stocks. In this way, then, as the identity suggests rising volume of imports, unless accompanied by saving, will result in rising prices and changing shares of distribution. Further, in order to improve the balance of payments situation, the volume of exports must be increased by a restrction of domestic consumption since production increases even if accomplished by rising output per man-hour must involve an imports increase.

Suppose the absolute value of exports (X) rises as a result of a favourable movement in the terms of trade. If absolute values of internal consuming sectors are constant, the nominal value of final output (N) will rise. This will change the active ratios of distribution (left-hand member) in such a way that, assuming the passive incomes are constant, they will rise. Gross profits,

employment income or indirect taxation must increase both absolutely and relatively. Should, for example, profits (O) increase and the surplus be used for increasing the level of reserves, internal consuming ratios would fall and the value of final output would not rise any higher than the original increase in X. The balance of payments would, of course, improve, and the total investment increase by the addition of the surplus foreign currency.

Now the very fact that the terms of trade improve implies a decrease in the elasticity of demand for British goods and services. If the surplus earned by profits were invested in fixed capital so that the ratio f would remain constant or rise, nominal value of final output would increase; however, if the investment were to result in an increase in production, price per unit of final output would be no higher than before; hence the possibilities of future increases in foreign reserves could be improved. In this way, improvements in the terms of trade can be "exploited".

However, if the increase in value of final output due to an improvement in the terms of trade is accompanied by a rise in e (employment income ratio) the situation may be very different. If the increase in employment income is devoted entirely to personal consumption so that the ratio c remains constant or rises, the value of final output will rise more than the initial increase due to terms of trade; hence the result will be inflationary. Demand for imports will rise and the balance of payments be no better off than before. Again, the burden of anti-inflationary pressure will fall entirely on production which must result in rising imports.

If a rise in X should be accompanied by a rise in the ratio of indirect taxes, t, the effect would not result in a further rising nominal value, N, if the consumption ratio c were sufficiently

restricted, and the surplus revenue accruing to the government were immobilized as a budget surplus. Under the circumstances, as previous analysis has shown, this is unlikely, for labour would probably demand further wage increases to maintain its consuming share. This again would result in a higher nominal value of final output.

Thus, the inflationary effect of rising export prices will depend entirely on the consumption ratios, for if absolute consumption is constant, an export surplus (in terms of value) will increase foreign investment. In this way, consumption ratios would fall as total nominal output rises. However, if consumption ratios are maintained, the effect must be inflationary as the equation demonstrates. In this case, the only possibility of eventually reducing prices is by increasing the fixed investment ratio so as to improve production per man-hour. If this occurs within the export industries, considerable advantage could be secured from further export surpluses. If the investment occurs within industries producing for domestic consumption, it is possible that output would rise sufficiently to accommodate increased absolute consumption with a fall in the personal consumption ratio. However if the initial assumption of constant passive incomes is relaxed, and no increase in investment occurs, and, consequently, no production increase, an increased standard of living can arise as a result of increased imports if no change of distribution or consumption ratios occurs. Once these ratios increase, the process of inflation begins and the advantage of favourable terms of trade decline. The position, then, of improvements in the terms of trade, can be summarized as three alternatives : 1. Favourable terms of trade can be "exploited" to the advantage of the country by increasing

the fixed investment ratio and decreasing the personal consumption ratio, 2. The personal consumption ratio can increase and the investment ratio fall or remain constant to be accompanied by rising prices, eventually causing the terms of trade to move unfavourably, 3. all consumption ratios can fall as nominal value of output rises and imports increase, resulting in no inflation but a higher living standard.

If inflation is defined as an increase in the value of final output with no increase in production, it must be conceded at once that any favourable movement in terms of trade is inflationary. But for the type of inflation here considered, an increase in the share of a productive factor at the expense of another, favourable terms of trade per se are not inflationary. Inflation only arises when consumption ratios are maintained, for at that point distributive shares will rise. Up to this point, imports will very likely increase and, hence, the physical quantity of final output rise, cancelling out the inflationary effect of the initial price rise of exports.

Of the three alternatives, the first is to be preferred, although it is difficult to generalize. Under current conditions, it would appear that this would increase the productive capacity of industry more painlessly than any other method. Personal saving would be easy since it entails no loss in living standard as absolute consumption remains constant. The second suggests that favourable terms of trade are inflationary since consumption ratios are at least constant causing a greater rise in price than the export value and an increase in the distributive shares.

Suppose, now, the value of X falls in such a way that the terms of trade are unfavourable. The first effect will, of course,

be a fall in the nominal value of final output. If absolute consumption does not fall, the ratios of consuming sectors must rise, but this must result in a change in distributive shares so that either e,o, or t, or all three must fall. It may be that the active sectors of production will refuse to accept this reduction in shares; if so, the value of final output will rise or will not fall in the first place. This, though highly unlikely, again is inflation for prices must rise as a result of distributive shares which are too high. The only way for unfavourable terms of trade to be deflationary is for at least one share of the productive factors to fall. Doubtless, this would be profits particularly in the export industries, since they, of course, are residual.

Obviously, the first impact of falling export values would be felt within export industries. Profits would decline as profit shares reduce. Since prices cannot rise, ex hypothesi, the only recourse of these industries would be either to cut production costs by increased productivity, to seek a domestic outlet for existing production, or to reduce employment by short-time working or unemployment. This, of course, reduces the share of employment income, e.

Again, relaxing the assumption of constant passive incomes, in all probability, quantity of imports would fall to a level which is in equilibrium with exports. This implies a reduction in the standard of living as distributive shares of active productive factors rise, and absolute income falls. A fall in export prices, therefore, will result in domestic inflation if productive factors refuse to accept cuts in their absolute incomes, or in deflation with unemployment if the factors have no choice in the matter. This is the crux of the problem, of course, for international

competition can result in falling prices of exports.

A distinction must be made in the analysis between unfavourable terms of trade which are the result of falling export prices and those caused by rising imports. The latter, as has already been discussed at some length, are inflationary as domestic prices respond to increases in import costs. Export prices will rise as well after a suitable time lag, assuming that demand is sufficiently inelastic. Again the fact that imports are rising implies that the markets for exports are improving especially among those primary producers receiving Sterling credits in exchange for their raw material. Post-war experience has shown that rising import prices have the greatest effect on the domestic price level. Unfavourable terms of trade which arise from this source, therefore, would be highly inflationary.

Similar to these cases of movements in the terms of trade would be the results of devaluation. Since exports are encouraged by such a move, and imports discouraged, the effect would be to increase the income of exporters, X. This would raise the value of final output and could only succeed as a measure to improve the balance of payments if ratios of consuming sectors fall. If they do not, the result is, again, inflationary. However, since imports increase in cost as well the inflationary impact is felt within the economy from both cost and demand. Cost increases will be transmitted to all industries through inter-industry transactions and price rises in response will occur. To ensure a constant value of real income as well as consumption, wage demands will be made and profit margins protected (in other words the wage-price spiral) until the value of final output has increased as much, or nearly so, as the devaluation. Passivity of incomes therefore, will determine the final benefit of the economy from devaluation.

While the inter-industry relations result in the entire economy reacting to movements in the terms of trade, this should not obscure the fact that some industries will be affected more than others. A fall in export values will have a serious effect on other industries which sell their products to these industries for further processing. It is possible, therefore, for slump conditions to appear in one particular industry (for example, textiles) while other parts of the economy are enjoying high wages and profits. Further, unfavourable terms of trade in one export industry may be counterbalanced by favourable terms of trade in another, depending on the state of world demand at the time. However, in view of the high dependence of Great Britain on exports (see Table IV, p. 14) any general movement toward falling world demand could result in serious unemployment. In this way, the competition of Germany and Japan could be a major source of difficulty.[1]

Therefore, a wise policy over the long run would appear to be alternative 1 above. Since a favourable balance of payments means another country's unfavourable balance, the opportunity of using favourable terms of trade for increasing productive capacity should not be missed. Before the self-correcting mechanism of international trade causes the terms of trade to return to equilibrium, the productive capacity will have already improved to some degree. Failure to exploit a favourable position was characteristic of Britain during the 1920s and 1930s. At a time when new industries could have been furthered, the terms of trade were in Britain's favour. Under the circumstances of the time, these

1.For a practical application of these theoretical consideration, see Economic Survey for 1956, Cmd. 9728, pp. 35 - 38.

high prices for British exports combined with very low wages were just sufficient to keep the economy from complete collapse, but, had the return to the pre-war parity of the pound not been attempted, very different conditions might have been obtained. It would then have been possible for primary producers to afford more British goods and unemployment in the depressed export industries might have been eliminated. This, however, is a historical lesson of lost opportunities.[2]

b. Government.

The government share of final output, G, is considered an "external" consuming sector and is expressed in absolute terms just as exports. This is to suggest that government expenditure is determined largely by extraneous influences over which the "internal" consumers both individual and institutional have no control.

Fundamentally, there will be two methods by which government revenue can be obtained, 1. by reducing the share of final output which consumers may have, and 2. by increasing the value of final output so as to secure a given absolute revenue. The second is, of course, inflation so long as no unemployed factors are in existence. During periods of unemployment, an increase in the value of final output will result in an increase in real value as internal consuming shares are not reduced. In this way, further consumption by the government will require more production and existing unemployed factors will be utilised. Once full employment occurs, however, further government demand for production will only increase prices, unless other consuming sectors are reduced. This, as already suggested, will occur when the surplus demand has so reduced the

2. C.L. Mowat, Britain between the Wars, Methuen & Co.Ltd. 1955, p. 260

amount of exports (or increased the amount of imports for consumption) that balance of payments difficulties arise. Again, this must result in an increased share of active incomes, assuming that passive incomes are constant.

Government demand for a share of final output can be raised by increasing its revenue from deficit finance. In this way, internal consuming sectors are unaffected; consequently, a depletion of stocks will occur as well as an increase in imports and a fall in exports. As a result of the attempts to replenish these stocks, labour will work overtime, and it will be to the advantage of entrepreneurs to increase their labour force and pay the higher wages necessary. The resulting increase in costs will force prices to higher levels.

However, if other internal consuming sectors are reduced so that the government consumption merely replaces the lost internal consumption, no inflationary effect could possibly arise. This would constitute a truly balanced budget, that is, the consuming power of the government would exactly equal the loss of internal consumption. Further, should the government wish to reduce the price level, total real consumption must be reduced in the form of a budget surplus. Therefore, the fact that a budget is balanced in money terms does not mean that it is balanced in terms of consumption.

The crux of the matter is the incidence of a tax. The effect of an indirect tax on consumption has already been discussed as directly inflationary as an active income sector. It must reduce total consumption by the amount of the tax to have any non-inflationary effect. Should wage earners, for instance, shift the tax by higher wage demands, the result would be inflationary, and government increases by virtue of a higher money value of final output. Likewise, profits tax can be shifted in the form

of higher prices as the expected profitability of investment, net of tax, is raised.

Further, should a tax reduce the level of idle balances in the hands of people, this again is inflationary. Personal saving, for instance, has reached a remarkably high level in 1953, about 70% of total taxes on income; thus, if an income tax were to increase and the payment were to be met out of personal saving with no reduced consumption, the effect could be inflationary if the government financed further expenditure with the funds which had previously been saved. In terms of final output, the government would be demanding more than before without decreasing the ability to consume. The importance of this is shown by the equation of consumption, for should G rise, and the ratios of internal consuming sectors remain constant, the value of final output will rise.

One of the important functions of the progressive income tax, the automatic stabilization of the economy, has unfortunately been lost as a result of taxation relief in the post-war period. At a time when budget surpluses were required to reduce consuming sectors, direct taxes should have risen in a greater proportion than incomes.

Percentage increase in gross income from employment.						Total increase
1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1948-54
77	5.5	11	7	6	7	52%

Percentage increase in income tax paid (including National insurance contributions)						Total increase
1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1948-54
15	2	12.5	12.5	-8	6	43.5%

Source: Table 8, National Income and Expenditure, 1955.

No systematic progressive relationship exists between income from employment and direct tax. Furthermore, during the years 1952 - 1954,

the capital account of the government sector showed an increase in "New issues and sales of securities" at a time when surpluses on current account were low. In 1955, this position was reversed.

For companies and public corporations, however, the position is different.

Percentage increase in gross trading profits of companies, etc.						Total increase
1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1948-54
4.5	16	16	-10.3	7.3	10	51%

Percentage increase in U.K. taxes on income (exclusive of tax reserved)						Total increase
1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1948-54
30	0	-7.5	37	-2.2	-3.7	55.5%

Source: Table 3, National Income and Expenditure, 1955.

Again no progressive relationship exists, but for companies it has become more difficult to increase fixed investment without price increases.

The other major source of government revenue, indirect taxation, can only be non-inflationary if, as suggested above, total consumption is reduced to an equivalent amount of the revenue received by the government. If such were the case, the amount of production available for export and government use would balance the loss of internal consumption. Here, the test would be the relationship between production of commodities and the personal consumption of them.

It is, unfortunately, impossible to make specific comparisons of consumers' expenditure, other than to relate total personal consumption to total production. In this way, real personal consumption has increased by 12% as compared with the gross national product increase of 20.4%. Considering the increase in total revenue of 41.5% between 1948 and 1954 due to indirect taxation, it is

hardly likely that it is effective in reducing consumption since the market price level of consumer goods rose by 25% during the same period. It is, therefore, highly improbable that indirect taxation can be anything but inflationary.

The situation can be summed up by the fact that government budget does not balance in terms of consumption. Stability of prices requires that final output be allocated to the consuming sectors in relation to the structure of demand. It is quite hopeless, for example, to expect anything but rising prices if the consuming power of the various sectors is greater than the supply which is allocated to them. This "allocation" is the function of the taxation system and should be concerned with total supplies of available goods and services as well as the demand for them. In this respect, the Exchequer has apparently failed, for fiscal policy could do a great deal toward checking personal consumer demand.

However, in doing so, taxation must not destroy the workers' incentive to produce. It may well be true that a minium degree of consumption is required for the rewards of production, and that to approach this minimum will reduce final output in real terms. This must be considered by the fiscal authority. On the other hand, the question of controlling consumer demand by a budget surplus involves a decision as to the effect on employment. It is possible that checking consumer demand will not stop rising wage costs and prices, but act to reduce employment of labour and capital equipment. Since production costs are already high, some industries may find themselves in this position; however, the fact must not be overlooked that if full employment and high wages are incompatible with the division of total output among the consuming sectors according to the needs of the economy, both present and future, then one or the

other must be reduced. If employment, it follows that the real value of final output may drop, thus reducing still further the absolute quantities required by the consuming sector; if wages, the difficulty is overcome, since final output is not reduced except in money terms.

It is difficult to imagine that if fiscal policy were to reduce consumer demand sufficiently to equal government demand for goods and services, the wage level would rise any further. In this case, employers would resist what wage demands were made since prices could not rise. Should such a measure result in unemployment and a downward spiral of real value of output and consuming ability, wages would have to adjust to a more realistic level. Thus, it can be suggested that budgeting for a surplus is a drastic measure which would endanger full employment. However, drastic measures are required to stop an upward spiral of prices and wages. In this way, a monetary budget surplus may be essential to a "consumption-balanced" budget. How great this monetary surplus should be is difficult to suggest, but it must be great enough to equal personal saving and such other excess as is required to reduce personal consumption to a level appropriate to that of government, export, and investment.

CHAPTER 12

FINANCE OF CONSUMPTION

a. The Self Financing character of wage increases.

The discussion has progressed thus far on the basis of a supply-demand relationship involving final output in terms of primary input. While the role played by money has been implicit in the difference between real output and output in money terms, it is now necessary to examine this role in greater detail. Since monetary policy has, in recent years, returned to a position of prominence in the control of inflation, the question of the control of a wage-induced inflation by restriction of credit and the money supply must now be answered.

In Chapter 1, the quantity of money as a result of wartime deficit finance was considered as well as its contribution to inflation during the immediate post-war years. There, the point was made that since velocity of circulation appears to be remarkably constant, a given quantity of money will eventually result in a national income proportionate to the amount of money. This, of course, is dependent on the propensity to consume. As the surplus currency was released with the removal of price controls, rationing,etc., this money became available for circulation and could finance rising prices and wages during the early post-war years. It was shown, page 11 , that the excess currency was not required for wages and salaries at their particular level until 1951 when income from employment and prices had risen sufficiently to absorb a large part of the money at a "normal" velocity of circulation. At this point rising wages and salaries would require their own finance, or, as A.J. Brown has suggested, "... present the economy with an invitation or challenge to finance them ..."[1]

1. A.J. Brown, The Great Inflation, 1939-51, Oxford University Press, 1955. p. 87

The difference, therefore, between the wages-prices spiral and other forms of inflation is that the money necessary to finance the spiral appears after the process has started, whereas in other inflations the money is injected into the economy by the finance of long-term investment, war,etc. which then act via the multiplier to swell consumer demand and raise the price level. A previous chapter has shown that autonomous investment has been a feature of the post-war period in Britain. In so far as this is financed by "new money", it contributes to inflationary pressure by expanding the money supply.

In a wage-induced inflation, however, rising prices will, in a sense, finance themselves, for since much of the finance of a business is internal, profits will rise sufficiently to maintain the financial soundness of the concern. Suppose, for instance, that a round of wage increases occurs. These will first be financed by the idle balances of the employers and, when necessary, by bank credit. Since wage earners represent a large proportion of consumers, profits can be recouped by a rise of the price level. However, since prices will not rise by as much as the wage increase, much of the wage payments made by entrepreneurs will flow back in the form of profits. The only extra quantity of money that is required will be the difference between the total amount required to purchase goods at the new price and that which comes back as a result of the increased consuming power of wage earners. So long as this difference comes from idle balances already in existence, no new money is required, but when these surpluses of currency are exhausted, further supplies must be forthcoming.

Clearly, if the wage increase is sufficient to stimulate demand for consumption goods, entrepreneurs will find it profitable to

increase their productive capacity as well as prices; hence a demand for further investment to be financed by bank credit, or "new money", will exist. This will increase the wage paying capacity of the capital producing industries and the competition for labour. In this way, the finance of the spiral will come about. Sufficient liquid reserves or credit must be available to finance a wage increase until the new stocks of goods are sold at enhanced prices at which time the extra wage payments will return in sufficient volume in the form of personal consumption to recoup the original loss of liquid reserves. The surplus finance required will be only the difference between the new wages paid by entrepreneurs and the amount which fails to return because of saving.

The situation can most easily be seen by comparing the wage payments with wage rates and the production of domestic consumer goods in industrial production. The money to finance rising prices of consumer goods is clearly available in the pockets of workers.

TABLE XXll.

Comparative Indices

Year	Earnings	Wage Rates[2]	Industrial Production (Annual)	Consumer goods at constant prices. (Annual)
Apr. 1947	100	100		
Oct. 1947	104.5	102	100	100
Apr. 1948		105		
Oct. 1948	113.3	107	108;3	99.7
Apr. 1949	115.2	108		
Oct. 1949	117.5	109	114.9	102
Apr. 1950	120	110		
Oct. 1950	123.7	111	123	104
Apr. 1951	131.5	118		
Oct. 1951	136.2	122	127	103.5
Apr. 1952	142.2	129		
Oct. 1952	147	131	123.3	102
Apr. 1953	152	135		
Oct. 1953	155	137	130.6	106
Apr. 1954	161	141		
Oct. 1954	166	144	139.2	111
Apr. 1955	176	152		
Oct. 1955	181	155		114.2 ✱

Source: Earnings and Wage Rates Indices - Ministry of Labour Gazette:
Industrial Production Index - Table 146, Annual Abstract of Statistics
Consumer Goods Index - Table 22, National Income and Expenditure, 1955

✱ - taken from Economic Survey, 1956, Cmd. 9728.

2. It is unfortunately impossible to break down the wage rate index into the various industrial groups since it is contrary to policy for the Ministry of Labour to release the indices for publication.

Fpr investment goods, however, as has already been shown, prices tend to rise faster than consumer goods. Wage increases in capital industries have less effect on consumer prices, (see p. 88),. The amount of money available for consumption purchases will be growing as each general round of wage increases occurs. If, for example, it is assumed that Mining and Quarrying, Engineering, etc. and Building and Contracting constitute capital producing industries, roughly 18% of the total labour force will be employed in the production of non-consumption goods. As wage increases are granted within these industries as well as in those producing consumption goods, sufficient currency exists to finance the consumer price increase. In fact, there will be more than sufficient since the prices increase less, on a percentage basis, than the wages.

It is still necessary, however, to finance the investment industries in some form or another, and this, of course, is accomplished by both internal finance, new issues, or possibly, credit. Internal finance of fixed investment has become extremely difficult by the high rates of taxation since the war.

Saving, new capital issues and fixed investment by companies and public corporations.

	1948	1949	1950	1951	1952	1953	1954
Undistributed Income	810	953	923	777	1069	1360	1416
New Issues	238.8	113.1	307.2	239.7	332.5	330.7	406.9
Gross Fixed investment	699	819	902	969	1013	1133	1246

Source: Table 45, National Income and Expenditure, 1955; Table 316, Annual Abstract of Statistics.

Rising gross fixed investment, by about 78% between 1948 and 1954, has been financed by new issues which rose by about 70% and undistributed profits which increased by only 41%. It would seem, therefore, that industrial issues are becoming more important in the finance of fixed investment since taxation of profits is so high. Should this trend continue, and it appears that it will, the problem of further finance for fixed investment will become greater. In addition, the larger share varying between 25% and 50% of new issues is for nationalized industries so that companies are still relying to a great extent on ploughed back profits. Apparently, consumer demand is great enough, assuming that liquid reserves amassed during wartime deficit finance are used up, to finance a good deal of business expansion. As depreciation and obsolescence increase with the larger accumulation of fixed investment, further reliance on industrial issues must occur.

It is, unfortunately, impossible to estimate how much of fixed capital investment is financed by undistributed profits and how much by new issues; however, to a large extent, the price-wage movement appears to be largely self-financing as far as durable equipment is concerned. Though the pressure on undistributed profits is great, some taxation relief can be secured by a minimum distribution of profits. Paish estimates that in 1952 with no profits distributed, taxation would amount to 50 to 65% of profit. With "no profits placed to reserve", this would be 63.8% to 74.6%[3] Obviously it is to the advantage of companies to refrain from the distribution of dividends as much as possible in the hope of future tax concessions.

3. F.W. Paish, op. cit., p. 65.

It is to be expected, therefore, that internal financing of fixed investment will continue so long as it is possible to gain relief from taxation. However, if future capital is to be forthcoming from new issues, some dividends must be paid.

In addition to the finance of fixed investment reserves must be available for circulating assets. Other forms of finance are available, however, in the form of bank advances, credit etc. which can assist companies in the current financing of business activity. The annual balance sheet analyses of the Economist show some interesting facts regarding the changes in the structure of both assets and liabilities.

Table XXIII.

Changes in Current Assets and Liabilities.

Changes in Current Assets.

(£s million)	1950 - 51	1951 - 52	1952 - 53	1953 - 54	1954 - 55
	303.5 (13.5%)	441 (18.3%)	11.5 (.36%)	108.4 (3.3%)	303.3(10.4%)

Changes in Structure of Assets

Stocks	15%	34%	-1.2%	.42%	12%
Debtors	16%	18%	-1.75%	6%	13.5%
Gilt-edged	13.5%	28%	3.4%	3.2%	-14.5%
Other Securities	3%	- 4%	11%	11.5%	8%
Cash	11.5%	- 1.6%	2.8%	3.9%	10.8%

Changes in Liabilities

	1950 - 51	1951 - 52	1952 - 53	1953 - 54	1954 - 55
Banks	3.9%	16%	----	-----	1.4%
Creditors	35%	45%	----	30%	41%
Tax Reserve	12.4%	2%	100%	17%	10%
Other	1.5%	.4%	----	4.6%	----
Total	52.8%	63.4%	100%	51.6%	52.4%

On an average, over one half of current assets are financed by current liabilities, the rest being financed by business reserves. On

the liabilities side, it is apparent that banks are assuming a less important role than are both creditors and taxation reserves. In a sense, this suggests that companies are financing themselves since almost one half of changes in current liabilities are from within the structure of the companies. The tendency appears to be a movement away from the banks as higher interest rates are felt.

On the assets side, debtors and stocks show the effect of the decline in sales during 1952 after the rather heavy build-up during the previous two years. The effect of the credit squeeze is seen in the shift from gilt-edged and the increase in cash in 1954 to 1955. Considering manufacturing as a whole, Table 53 of the Blue Book states that the total value of stocks held at the end of 1953 was £3,373 million of which only 14% or £478.1 million was financed, presumably, by bank credit. The rest must have come from creditors, etc., financed by either current or anticipated profits and, of course, reserves from within the industry itself. Considering industry as a whole, bank advances amounted to about 25% of working capital in 1953.

Here, therefore, will probably be the major source of extra finance required for rising wages. However, it should be noted that the tendency is away from the banks in the direction of trade credits advanced among companies. This can only be possible if anticipated consumption at a certain price level is sufficiently high to merit the granting of this inter-industry indebtedness. If this is true, it must follow that the wage-price spiral is becoming more self-financing as it progresses. Bank advances, for example, increased considerably from 1946 to 1952, but declined in 1953 and in 1954. At any rate, the suggestion holds that "new money" furnished by banks has been available for the financing of "stocks and work in

progress".

Bank advances, monthly averages (£s million)

	1946	1947	1948	1949	1950	1951	1952	1953	1954
	896.2	1128.6	1354.6	1494.6	1683.9	1920.6	1930.6	1815.8	1904.1
Difference		232.4	226.0	140.0	189.3	236.7	10.0	-114.8	88.3

The difference between these monthly averages would be the amount of new money, presumably, required to finance rising wage costs, raw material costs, or in general, all costs which are higher than before. The rest will be recouped from higher prices as increased wages, etc. swell consumer demand.

These figures check very closely with stock appreciation, which is another way of showing the rise in cost of "stocks and work in progress". The effect of the fall in import costs from the 1951 high is seen by the drop in bank advances in 1952 and 1953, but the rise from 1953 to 1954 would probably suggest that this was due to the increased wage costs since import costs were reasonably steady at that time. If so, one could estimate that rising prices due to increased wages only require an extra quantity of money which amounts to about £88 million per month or about £1,056 million per year of private finance for working capital. The rest will come from profits, etc. which arise ultimately from the consumers of whom wage-earners are the majority.

The second source of money will, of course, be the central government in its lending principally to local authorities which are financed by Treasury bills in the capital account and which are taken up by the banks by an increase in their deposits, and, at the same time, an increase in liquidity ratios. In so far as the central government is in deficit this bank borrowing constitutes

"new money". Probably, therefore, not much over 10% of consumer purchases are financed directly through the injection of new money into the economy. The rest will be financed by wages increases and what redistribution of wealth occurs in the form of grants, welfare benefits, etc. that swell the consuming potential. Salaries and other forms of passive incomes will, when they become active, increase the consuming potential still further.

The "challenge" to finance a wage increase, therefore, amounts, in the final analysis, to only about 10% new money and credit, the rest is self-financing through the eventual increase in profits. It is, of course, quite impossible in a closed economy for wage payments and other incomes of productive factors to be completely self-financing. There must at all times be a margin of currency available to make up the difference between payments of productive factors and the consumption by them.

This difference has become smaller in the post-war years compared with pre-war. The redistribution of income to wage earners has resulted in a comparatively small amount of saving since wage earners are heavy consumers. High taxation of profits has so narrowed the difference that a shortage of saving is the real problem. In pre-war conditions, it may have been true that workers were underpaid and their consuming ability heavily restricted; however, this meant that no shortage of money for investment purposes existed. Companies were free to expand out of their own profits without relying on new money or capital issues. Under current trends, expansion of fixed capital will require new finance which must be supplied by the banking system. This means a growing rather than a constant supply of money to finance

the ever-expanding productive capacity necessary to supply the consuming potential. The supply of money, it should be noted, is subordinate to the fact that the consuming potential has increased and is increasing as wage earnings grow even faster than wage rates. The money supply is, in reality, a function of the distribution, rather than the size, of national income. As wage earners increase their share of national income, more money and credit in absolute terms, will be required. However, the amount of new money becomes smaller in relation to the amount already in the hands of consumers. In this way, as distribution in favour of wage earners progresses, wages-prices spiral becomes more self-financing and, it may be added, more difficult to control by monetary means.

b. Effects of a restriction of credit on consumption.

According to the equation of demand, p. 149 , it was shown that total output was divided among internal consuming sectors defined as personal consumption, fixed capital investment in stocks, and the external requirements of government and export. The situation presented by a wage-induced inflation is that personal consumption owing to rising wage costs is greater than the domestic productive capacity of the nation can support with a given level of investment. Consequently, exports tend to fall in relation to personal consumption, and imports rise. Rising wage costs force price levels higher as demand for personal consumption rises. In order to assess the value of a rise in the Bank Rate in checking the wage-induced inflation, therefore, it must be clear at the outset where the initial cause lies.

The phenomenon of wage-price spiral is an outgrowth of a

"cost-plus" theory of value. Prices of products are determined by the cost of the productive factors which enter into them. These represent, for the economy as a whole, primary inputs including imports, labour, profits, etc., and indirect taxes. A rise in the cost of any one productive factor will result in a price rise if market demand is sufficiently strong. Generally, speaking, this has been true in the post-war world, though it need not apply at other times. Since a rise in wage costs swells demand for personal consumption, the spiral of wages and prices can be largely self-financing, requiring only sufficient funds to replace those which fail to return to the producer. In the interval, that is, during the time when higher wages are paid and the resulting higher consumption occurs, credit in some form or another must be forthcoming. Now let it be assumed that bank advances are restricted and interest rates are raised in accordance with a credit squeeze. A company will have several alternatives. First, (see Table XXIII) it can reduce the level of stocks and work in progress. This would entail a sale of existing stocks and a restriction of production to replace them. There is, however, a certain minimum level below which stocks must not fall, for the fluctuations of market demand are such that if demand rises and stocks are insufficient to supply it, profits are lost. This the producer can hardly afford. He will, therefore, be limited in his ability to reduce stocks to the level required by limited bank advances.

Second, if this "danger point" is already being approached, the company can finance further stocks by means of trade credits. Stocks, in other words, can move to the customers' premises and

be financed by

be financed by promises to pay at a later date. This could perform the service of bank advances quite well so long as confidence in future market values of products are maintained; however, should this confidence be undermined, creditors would press for payment and debtors who represent further creditors on the liabilities side of the balance sheet, will find it difficult to raise the necessary cash. The result of this would be a complete collapse. Therefore, one would expect a reduction of trade debts in view of the psychological effect of a credit squeeze. Table XXlll, however, shows no such tendency in response to rises in the Bank Rate, only a shift from bank advances to creditors in the liabilities and a rise in debtors in assets.

Third, liquidity can be reduced to replace lost bank advances. Again, there is a limit here to the minimum required for safety. In fact, there has been a shift away from gilt-edged into cash on the assets side as rising interests result in a fall of security values. In general, any movement toward greater liquidity would result in reduced dividend payments, thus reducing the pressure of demand for consumer goods.

Fourth, it would be possible to curtail investment in fixed capital equipment in order to maintain a stronger liquid position.[4] This is, in fact, the ultimate aim of credit restriction, to reduce capital investment by making it too expensive. This will be especially true in heavy industry where fixed capital equipment is essential for production. Light industry, however, will not be affected to any great extent since fixed capital is less important.[5] Again, this operates to make monetary policy

4. Meade and Andrews conclude from examining results of the Oxford studies that liquid resources are a major factor in influencing the decisions of entrepreneurs as to "extensions and renewals". Wilson & Andrews, Oxford Studies in the price mechanism, Oxford, 1951, p.30

5. Please see page 226

selective, for light industry highly dependent on labour has been in a position of high liquidity since the war. Here also the effects of a restrictive monetary policy will be rather slow in being felt, for existing orders of capital equipment will have to be worked off. This time lag may result in a stimulation of a downward movement in effective demand when the danger of inflation has passed, thus making the mechanism of monetary control too cumbersome.

It is this backlog of orders which has led Mr Harrod to the conclusion that it is not investment itself which should be cut but the long order books. At a time when productive capacity should be increased, orders placed for more fixed capital equipment are far too long in being filled; hence the ability of a company to increase production is seriously hampered. In the meantime, of course, rising wage costs press upon the price level and the economies of increased production cannot assist in absorbing wage costs simply because of long delays in delivery. In effect, the demand for investment goods has increased faster than the ability to supply them.[6]

5. In this regard, Sir Percy Mills of the Engineering Industry pointed out that capital expansion schemes were being cut because of the credit squeeze and that wages were not in balance with production. , Manchester Guardian, January 5,1956.

6. R.F. Harrod, "Current problems and Their Impact in 1956", District Bank Review, December, 1955, p.9. He notes also that new beginnings of factory buildings measured in square yards, were 62% higher in April, 1954, to March, 1955, than in the preceding year, and 50% higher than the average for the five years before.

There is no doubt that there is considerable validity in the argument that long delays in delivery do result in slowing up the ability of industry to increase production in response to high demand. However, it is doubtful whether the correct approach toward remedying the defect would be actually reducing the number of orders rather than making it possible to increase the productive capacity of capital goods producing industry. Indeed, it would appear to be even more sensible, since over-expansion of capital goods industry would possibly lead to instability of the economy (the familiar accelerator), to restrict the level of consumer demand which leads to the placing of orders for capital goods faster than industry can supply them. Final demand should not increase at a greater rate than the factors of production available to the capital producing industries

Since, however, the credit squeeze is "non-selective" (subject to the qualification above) it applies to the capital goods industries as well as to those actually placing the orders. Engineering, as an example of a producer of capital equipment (see footnote 5), is "squeezed" and its own ability to produce reduced because of the monetary policy. This is an important point to be considered in the application of monetary restriction, and should not be overlooked, for in this way the credit squeeze reduces the ability of the economy to overcome the difficulties of a wage-induced inflation.

Lastly, companies may be able to overcome the restriction of bank advances by increasing prices and, consequently, gross profits. Obviously, this is not available to all, for, if it were, the credit squeeze would be inflationary with the impossible situation of a wages-prices spiral being self-financing. Indeed, in such a case, higher rates of direct taxation would have to be met.

Restriction of bank advances will reduce the amount of working capital available, and, hence, encourage the entrepreneur to resist rising wage claims. In this way, the credit squeeze may have some effect on reducing the tendency for wage claims to be granted. Indeed, by causing a restriction of dividend payments, trade unions will be unable to point to distributed profits as a reason for a greater share for wages. Thus, by a tighter money supply, the means of paying higher wages will not exist. This will especially be true for the relatively small amount of new money required to finance the small proportion of rising wages which do not finance themselves, assuming that trade credits are incapable of substitution for lost bank advances.

Should inflation arise from an excess of money supply instead of rising wage costs, the situation would be very different. If, for example, the squeeze of credit has been applied during the early post-war years when a major cause of inflation was an over-supply of currency, it could have been instrumental in reducing this currency excess much more quickly. At the moment, when prices rise because of rising costs, the circumstances are quite different. In fact, because of increased cost of capital equipment, further pressures are applied to the entrepreneur at a time when he is already caught between new wage demands and exorbitant rates of direct taxation. To add a third, higher cost of fixed capital equipment, because of higher interest rates, will hardly remedy the situation.

Long term investment projects which are particularly hard hit by rising interest rates will be sharply cut by the credit squeeze. In so far as these do not contribute directly to increased production, the economy will benefit at least in the

short term. A greater share of final output will be available for personal consumption as a result of the resources released for the production of these goods and services. However, a strong case can be made against such a policy, for a restriction of such activity as the building of schools, hospitals, private dwellings, etc. limits, though indirectly, the productive capacity of the nation, at least in the long run.

Perhaps the greatest effect of the higher interest rate on the personal consumption ratio will be felt through the reduced incomes derived from securities. The loss of capital if, of course, considerable during a period of rising rates; indeed, in view of the large numbers of securities held by both private and institutional investors, it hardly seems advisable to rely on fluctuating interest rates as a policy. This must have a discouraging effect on future investment plans. Again, however, this will not affect the majority of consumers who receive by far the largest share of currency in the form of wage earnings.

Before conluding this section on the effect of a restrictive monetary policy on the spiral, four propositions suggested recently by W.T. Newlyn on the relationship of interest rates and the supply of capital should be considered in relation to the preceding discussion.[7] The first is, "national expenditure is unlikely to be affected in inflation by changes in the cost of money".

7. W.T. Newlyn, "The Credit Squeeze in the Light of Basic Principles", Bankers Magazine, November, 1955, p. 287.

This proposition can only have reference to an inflationary situation which results from causes other than high consumption such as an excess supply of money, for, in the case of a wage or cost induced inflation, as has been shown, consumption can be restricted by a raising of interest rates. For an inflation arising from a surplus of money, the rate of interest would have to be higher than the expected price rise; hence A.J. Brown estimates that since prices were rising at the rate of 6 or 7% after the war, an interest rate of 10% would be necessary to check expenditure. Once the surplus of money is absorbed by the economy, a rise in interest rates can have an effect in checking expenditure because of the expense of the new credit required to finance rising expenditure. Since, in the former case, the money supply is already in existence, and in the latter, it must be created, entrepreneurs will consider rather closely the expense of expanding their productive capacity in the light of the cost of new money to finance expansion. With monetary inflation, the only decision to be made is whether expansion is the most profitable way of using existing funds, but with a cost-induced inflation, the risk is greatly heightened because of the expense of credit in relation to the expectation of future prices.

Second, "expenditure cannot take place if the availability of money is insufficient to finance it." This proposition is obvious enough, but in the light of the preceding, should be interpreted with some caution. It must be kept in mind that as an income redistribution in favour of a high consuming group takes place, expenditure becomes more self-financing (see above). A smaller proportion of new money, in relation to that already in the hands of wage earners, is required to finance expenditure.

In the aggregate, since the propensity to consume is rising as distribution of real income in favour of workers takes place, the possibility of checking the cost induced inflation by restricting the supply of new money becomes more difficult.

Third, "availability can be curbed by restricting supply if idle funds have been absorbed." Again, this is obvious in view of the discussion of proposition one. It suggests the possibility of checking inflation by monetary means only after excess money has been absorbed. However, as stated above, a restrictive monetary policy can be instrumental in absorbing idle funds more rapidly. This, it would appear, is a most useful function of high interest rates.

Fourth, "the cost of money will rise if the supply is restricted". To this may be added the converse, the supply of money will be restricted if the cost of money rises. Brown has correlated the supply of money in relation to national income, and interest rates as the yield on government bonds for fourteen countries. He concluded that a little more than one half the changes in interest rates can be explained by changes in the supply of money (the correlation coefficient is - 0.7163).[8] These propositions will help to clarify the issue of what monetary policy can and cannot do.

Clearly, then, monetary measures designed to check a wage induced inflation will have an affect only on the relatively small amount of credit required by companies to finance current working capital. Other effects of a rise in the Bank Rate will be confined to values of securities, and a scaling down of investment plans. Hire purchase restrictions will, of course, directly affect consumer purchases of durable goods, but a reduction of

8. A.J. Brown, op. cit., p. 205

investment activity will only affect consumption indirectly as the production of capital goods declines, relaxing the demand for labour. This, too, will affect only those long-term projects which rely on long-term credit of which interest rates are a major portion of costs. In this way, interest rates are selective in that some capital investment projects are checked to a greater degree than others.

In another sense, however, the rate of interest will affect the expnasion of those new industries which require long-term capital for development. The relatively prosperous industries which enjoy profits of security, since their products are in current high demand, will not require borrowed capital for exapnsion purposes, for sufficient reserves will be accumulated over and above taxation. Since there is no way of determining which is essential for the economic welfare of the nation, the restriction imposed by high interest rates may be damaging. New industries are essential for the progressive development of the nation if export markets are not to be lost. In this way, restriction of fixed capital investment through borrowing may do more harm than good.

The analysis of company balance sheets furnished by the Economist is confined only to the large well-established public companies. Is was shown that bank advances are not at all so important in the finance of working capital. This, however, does not apply to the small private company for which bank advances must still be important in their finance. This is shown by the fact that bank advances amounted to 25% of stocks and work in progress in 1953. In this way, the restriction of credit becomes more selective. For these companies whose products are assured of a

market, credit restriction will have little effect, especially since trade credits for these companies will take the place of bank advances.

In view of the size of the national debt among the industrial nations, it is not at all surprising that the interest rate as a regulator of business activity was not generally favoured after the war. Low interest rates make the burden of the national debit considerably lighter. They also encourage investment in housing and other long-term investment programmes which were required as replacement of capital lost during the war. In the light of these considerations, it is rather surprising that a return to monetary control should occur. The national debt is still high and even though lost capital may have been replaced, the need for further investment is still current.

c. Effect of credit restriction on the distribution of income.

The last point to be considered is the effect of monetary restriction on the equation of distribution (p. 129). The effect on the consumption side has already been discussed as a reduction in f (fixed investment) and s (stocks). Aggregate stockholding will probably be reduced absolutely and certainly fixed investment will be. Which fixed investment will be cut is a different matter, for rising interest rates are often erroneously selective. If personal consumption (c) rises absolutely to the same extent as fixed investment and stocks fall, no change in value of final output will occur. This, in effect, means a transfer of resources from investment to consumer goods and no change in distributive shares will result. Obviously, this situation will represent an ideal

adjustment to a change in investment and frictions will be set up which will hamper the movement of productive resources to industries producing goods for personal consumption; however, assuming that indirect taxes (t) are the same for the new personal consumption goods, the adjustment to a new equilibrium will take place with no change in distributive shares.

Under conditions of over-full employment, aggregate personal consumption will probably not change absolutely to any great extent. The ratio, however, will change as absolute investment falls. The money value of the final output will fall as a consequence. This will affect active distributive shares adversely as ratios fall and passive income shares rise. Unemployment or short-time working in the capital producing industries will cause a fall in the ratio of employment income (e) and loss of profits (if any) will cause a fall in o. The action will be delayed by the existence of long order books for capital equipment, but it will eventually occur.

It is conceivable that the "slack" which results in the capital goods producing industry from credit restriction could be taken up by orders for export; however, since overseas markets are price elastic, this could only occur if prices should fall. The chances of this are rather remote in view of the high cost of labour since the credit squeeze makes no provision for wages to fall. Further, since the capital goods industries are themselves heavy users to fixed capital, there is small likelihood of economies of production. The only chance for increasing exports of capital goods would for competitive prices of foreign producers to rise while British prices remained stable.

The other alternative for increasing exports would be by the

eventual reduction of personal consumption which would result from unemployment, not by reduced wages. Trade unions will resist wage cuts so that some short time working must occur instead. This, of course, involves waste of productive resources. Quantity of production and exports may, therefore, fall. Personal consumption arising from securities will be reduced at once through the credit squeeze, since capital values fall.

The important feature of the reduction of fixed investment is that the capacity to produce is restricted. This can only result in a rising income ratio for labour so long as demand remains high. There is no guarantee that wage payments will fall sufficiently to reduce the pressure of personal consumption. In fact, it is quite possible that, since opportunities for investment which will increase output per man-hour are limited, demand for labour will rise. This will increase the employment income ratio, Since credit restrictions affect the capital goods producing industries to a greater extent than the light consumer industries, the possibilities of increasing the aggregate producing potential of the economy becomes rather remote. In this way, restriction of capital investment will create greater and more serious problems than the temporary one which it solves. As money flows into the hands of wage earners at an increasing rate, the possibility of monetary control becomes even more remote.

To Harrod's point that long delivery dates hinder the increase of production can be added the fact that export orders can be lost for the same reason. A nation so dependent on exports, particularly of Engineering products, can hardly afford to limit the expansion of this industry. On the other hand, Textiles, an example of a declining industry, will inevitably lose foreign markets to competitive producers in other nations. It

seems, therefore, that to use an anti-inflationary weapon such as monetary policy which makes no distinction among declining and growing industries is a mistake.

An interesting contrast can be made between the monetary policy of the Federal Reserve Board in the United States and the current credit squeeze in Great Britain. The United States, not dependent on exports, had apparently succeeded in 1955 in stabilizing the price level by the application of monetary checks. This has been accomplished by the double action of restricting bank reserves and raising the re-discount rate after banks were forced to seek loans at the Federal Reserve. The effect was an over-all restriction of credit, including consumer credit, with the result that in spite of rising expenditure on capital investment, prices remained stable throughout 1955. It appears that the difference between the two techniques of credit restriction is the application of gentle pressure on bank credit through reserve limitations and the sledge hammer effect of successive rises in Bank Rate. The latter reduces consumer demand, if at all, by restricting fixed capital investment, while the former restricts consumer demand in conjunction with demand for investment goods, thus maintaining the relationship between personal consumption and investment. The raising of the Bank Rate distorts the economy by reducing, first, investment demand and, second, after a time lag, consumer demand through the unemployment and short-time working which results.

d. Conclusion.

In conclusion, it appears that monetary restraint through rising Bank Rate is a short-sighted policy of control of a cost induced inflation which will only have an anti-inflationary effect by a release of scarce productive resources for the production

of goods and services for personal consumption. Since the wages-prices spiral is, to a large extent, self-financing, demand for personal consumption goods will not be restricted except for the "new money" required to finance the wage payments which fail to return to the producer as gross earnings. The differential growth of incentive payments and overtime earnings in relation to wage rates has resulted in a large volume of currency which is, in effect, "out of control". Whereas the excess liquid funds as an inheritance of the last war were sufficient to finance an inflationary process, rising wage payments which have borne no relationship to productivity have served to replace the earlier excess of liquidity. In this way, Mr Newlyn's second and third propositions are largely satisfied. "Idle funds", as he pointed out, are in the hands of a high consuming group ready to be activated when the level of prices rises sufficiently.

Credit restriction in the form of limited bank advances tends to be selective, affecting those companies which are dependent on them for the finance of working capital. Those companies whose products are well-established on the market will find no difficulty in financing working capital through trade credits. The system of inter-industry indebtedness, while dangerous in the event of a general loss of business confidence will furnish quite an adequate substitute for bank advances.Though the rate of discount may be high, "debtors" on the assets side of the balance sheet will cancel the "creditors" on the liabilities side. In this way, a restriction of bank advances will have a greater effect on new companies than on the older, well-established firms.

This is especially true if a reduction of fixed capital investment is necessary to protect the liquid finances of a new company. The squeeze of credit makes it much more difficult to secure finance from the capital market as well, so that capital investment plans must be revised. The new, growing industry will be hardest hit. In this way, the use of monetary policy tends to be erroneously selective if it is assumed that new industries are desirable.

For long-term capital projects, rising interest rates will force an indefinite postponement. Since interest rates form a major part of cost, these projects will become too expensive to be undertaken. This will release productive factors for other uses which may be more desirable at the particular time. In this way, monetary policy will be highly selective.

Ultimately, however, the credit squeeze must reduce productive capacity if it is continued for a sufficiently long period of time. Since the difficulty is really a lack of productive capacity to satisfy both personal consumption and exports at stable prices, it follows that capital goods producing industries are inadequate as well. Long delivery dates tend to reduce the producing capacity of industry within a given time limit. In the meantime, prices rise as production is encouraged by incentive and overtime payments to labour which further increase the supply of money in circulation in relation to production. Again, the credit squeeze will check the expansion of the Engineering industry which is itself capital producing. In this way, the cost induced inflation becomes self-perpetuating.

Finally, the fact that the growth of productive capacity is checked will result in an economy that is weighted in favour of

personal consumption. Failure to reduce the consuming capacity of the population along with the capacity to produce suggests that the problem of a spiral of wages and prices will temporarily be solved but will be made greater in the long run. Monetary control under current conditions is a means of gaining a temporary respite from the symptoms of inflation but will not affect a cure.

Summary

The consuming sectors of final output have been examined with the object of determining the conditions under which cost increases can be shifted to consuming sectors in the form of price rises. The share for personal consumption was found to be increased from its ordinary "equilibrium level" by income redistribution in favour of wage earners through both welfare benefits and incentive payments to labour. A consumption multiplier, therefore, results which encourages both investment and price increases for consumer goods. Personal saving, the residual between income and personal consumption, has risen partly because of forced saving by passive incomes and the fact that domestic production of consumer goods is inadequate to supply the demand at the existing price level.

Net taxes paid by wage earners (indirect plus direct taxes less welfare benefits) are quite small, amounting to about 4%, on an average, of gross income. The result is a subsidy of labour which, like any other subsidy, should, to be effective, reduce the tendency for wage claims to be made. The overall wage bill to the nation should be smaller as a result of guaranteed welfare benefits than it would be if the worker were to provide these benefits for himself. This, however, is not the case; on the contrary, the wage bill tends to be higher as labour demands an increasing share of total output.

The investment sector of the consumption side is only inflationary, of course, if it is not accompanied by equivalent saving. If induced investment in response to the consumption multiplier is great enough to stimulate further incomes not accompanied by saving equivalent to the level of induced investment,

a self-generating spiral of wages and prices emerges to be checked only by passive incomes which will be forced to save by high prices. Autonomous investment, in addition, has been quite high during the post-war period and will continue to be so as the needs of an expanding economy for basic materials and resources grow. Furthermore, the fruition periods for autonomous investment tend to be long so that increased production will not be available before considerable inflationary pressure is felt. However, with a long life expectancy, autonomous investment must eventually decline and release further resources for induced investment and production of goods for personal consumption.

The external consuming sectors, exports and government, are important since their size determines the amount of final putput available for consumption by internal sectors. Favourable terms of trade increase the value of final output by definition, but if accompanied by rising internal absolute consumption, they will be inflationary by causing a rise in the value of final output to a greater extent than the original. This, in effect, will result in constant, or nearly constant, internal consuming ratios. The possibility of exploiting favourable terms of trade was suggested as a painless method of saving for further investment.

The consuming share of government (in absolute terms) can be secured by either reducing the share of consumption for other incomes with final output remaining the same in value, or by increasing the value of final output. A combination of both is, of course, quite possible. However, under full employment conditions, a balanced nominal budget does not necessarily mean a balanced consumption budget. If the revenue for government

consumption is derived from a balanced nominal budget but internal consumption is not reduced to the same amount, the result is inflationary. Fundamental to this concept is the shifting of the incidence of taxation - direct profits tax shifted to consumers as high prices, and indirect taxation shifted by workers, through higher wages, to passive incomes.

Finally, monetary policy and its effects were discussed including the fact that rising interest rates tend to be erroneously selective and that the greatest quantity of money is out of the reach of monetary control in the hands of wage-earners. As a consequence, a demand for personal consumption is virtually untouched, whereas fixed investment is curbed, thus reducing the future producing potential for the short-term benefits of an increased quantity of final output for personal consumption. As a method of control of the prices-wages spiral, it must be cumbersome for only the extra money necessary to finance that part of wage payments which fails to return to entrepreneurs as gross profits can be affected by monetary control.

CHAPTER 13.

THE SPIRAL RESTATED

a. Distribution of income to producers.

In the first two parts, the forces tending toward cost inflation were analyzed and discussed from the standpoint of both supply and demand. These constitute the essentials necessary for a wages-prices spiral, viz. cost increases must be reflected in higher prices and demand must be great enough to accept them. If these conditions are satisfied, the stage is set for the price-wage spiral.

It remains now to examine these conditions in relation to past experience and current economic theory so as to evaluate them with the necessary perspective. Once this is accomplished, it should be possible to make positive suggestions.

As has been shown, the wage-price spiral is ultimately a question of distribution. A productive factor can increase its share of real output at the expense of other incomes. If such is the case, the gaining factor can be considered "active" and the losing factors "passive". The relationship between active and passive incomes can be shown rather simply with the aid of a diagram. (diagram 2.(

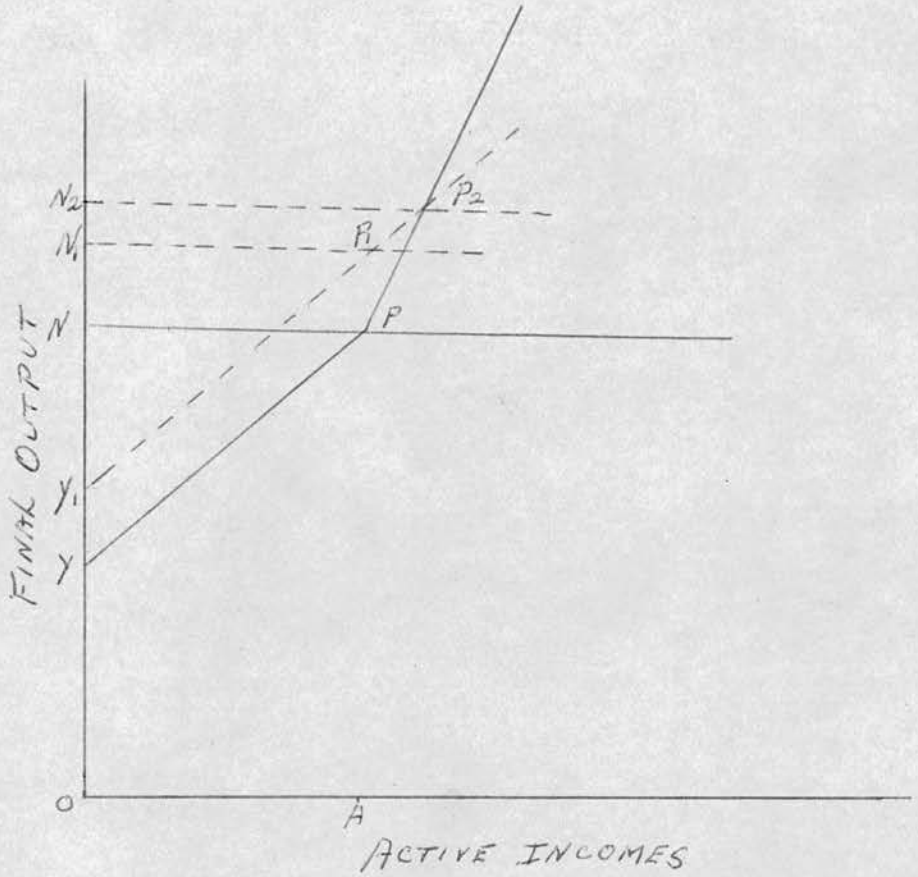


DIAGRAM 2, (Imports Cost Rise)

On the horizontal axis measure active income sectors, OA. On the vertical, measure final output equal to ON. A certain portion of final output, OY, will represent passive incomes and the remainder, YN, will be active incomes equal to OA on the horizontal axis. Included within the quantity OY will be imports, overheads, services, etc. which are essential to production in the aggregate. If NP is set off equal to OA and the points P and Y are joined, a line with a slope of 45^{o} is formed (YN=NP). Should the value of final output fall, active incomes would be reduced along this line to nothing when final output equals OY. This would be the theoretical minimum below which value of output could not fall and represents necessary payments to passive income sectors.

The intersection of the 45° line with the line of final output at N represents the equilibrium distribution of income which satisfies all productive factors. In the equation of distribution, the active incomes in the denominator are measured on the horizontal axis so that if any influence disturbs the ratios of distribution, price adjustments will occur until a new equilibrium value of final output determined by the intersection of the line representing the distribution ratio desired (PP2) and a new 45° line. Suppose that an imports cost rise forces the value of passive incomes to Y1 and value of final output to (YY1 = NN1) as in diagram 2. A new 45° line Y1P1P2 representing potentially a new equilibrium ratio of distribution at a higher value of final output will then exist. The actual equilibrium point P2 will be determined by the slope of the line P1P2 which represents the ratios of distribution that active incomes will maintain. In this way an imports cost increase which would ordinarily result in an increase in value of final output to N1 because of maintenance of distributive shares causes an increase in value to N2. This is the situation which existed in 1946-48 as analyzed on pp. 19 and 20.

It is the slope of PP2 which is of the greatest importance. If, for example, labour were in such a weak bargaining position that it would be forced to accept a reduction in real wages, the profits share could either remain constant or increase at the expense of labour, and the line PP2 would be more nearly vertical. In other words, wage incomes would be passive and the price approximating P1 would be the result. Further the smaller the share of labour in final output, the smaller the ratio it will attempt to maintain in order to uphold its real wages. Thus, in the

same way, the slope of the line PP2 will approach more nearly vertical. Clearly, the more vertical the income ratio line, the quicker the spiral will converge and the less the final price will rise. There are, therefore, two converging forces suggested, first, the weakness of an active income sector which contributes to "passivity", and second, the size of active income sectors which attempt to maintain their ratios.

It is apparent from the diagram that a spiral resulting from a rise in imports cost will converge fairly quickly since active incomes will be concerned primarily with maintaining real incomes. As a result, production increases will have the greatest opportunity for contributing to convergence. This would be shown in the diagram by a shift downward and to the right of the 45° line, Y1P1P2, as the share of passive incomes in final output becomes smaller and the share of active income rises.

The same diagram will apply to individual industries as well as to final output in the aggregate. For example, in basic industries with a high proportion of labour costs, the 45° line Y P1 would be much lower and the slope PP2 corresponding to active income ratios would be much greater. Diagram 3 shows that the converging point will be much higher than if active incomes were a smaller proportion of final cost.

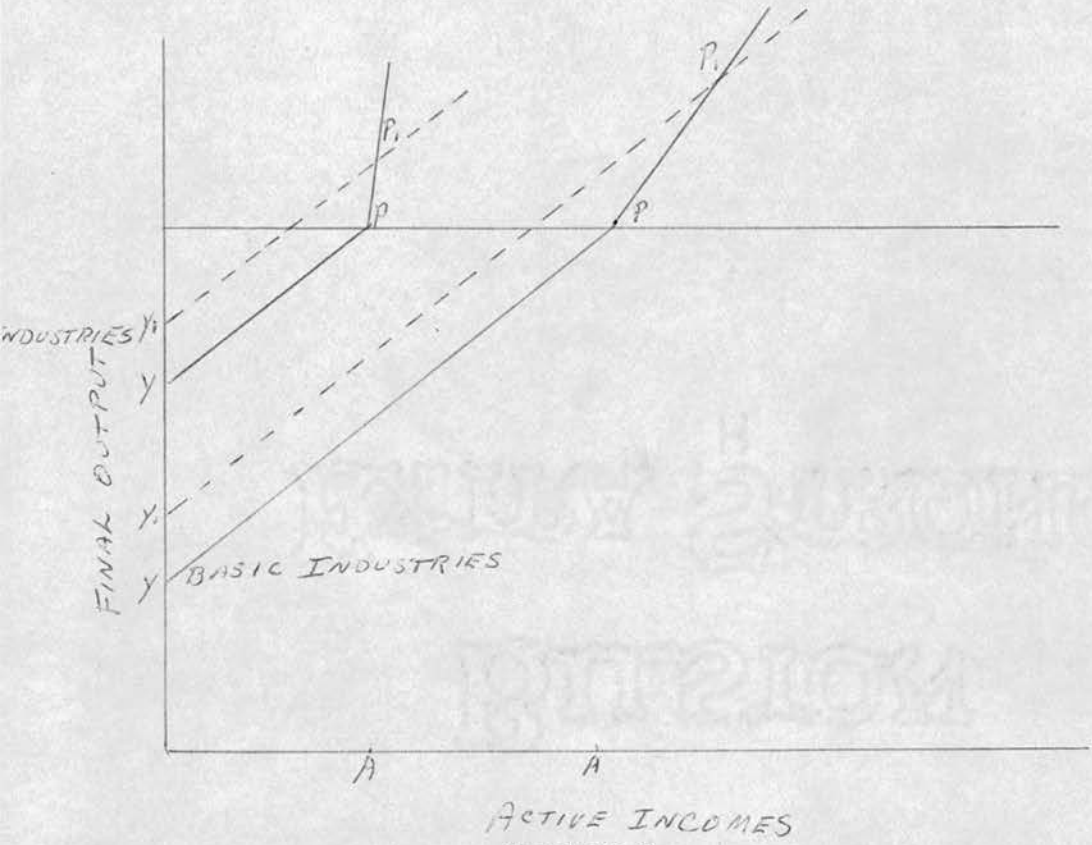


DIAGRAM 3
(Imports Cost Rise in Basic Industries and Consumer Industries)

The opposite is true, obviously, for those industries with a small proportion of active incomes to final cost.

Suppose, now, that labour demands greater share of final output than before. In this example wages will be measured on the horizontal axis and passive incomes plus profits on the vertical. OY represents passive incomes, ON, profits, and OW, wages. A line drawn from Y to the point of P suggests that wages and profits are mutually exclusive, and the slope (not necessarily 45°), the ratio of one to the other. The increase in wages, WW_1 would be shown as PP_1 and total value of final output (ON OW_1) will accordingly increase. Profits will attempt to regain their former status and passive incomes plus profits will rise to ON_1 (NN_1 P_1P_2). Successive increases in

wages and profits will occur until both are satisfied at the point P_4, and the new value of final output will then equal $ON_4 + OW_4$. In the same way, if labour's demand for a higher income were to coincide with a rise in import costs, the dotted line beginning at Y_1 will intersect the new wage-profits ratio line (P_1P_4) at a much higher level.

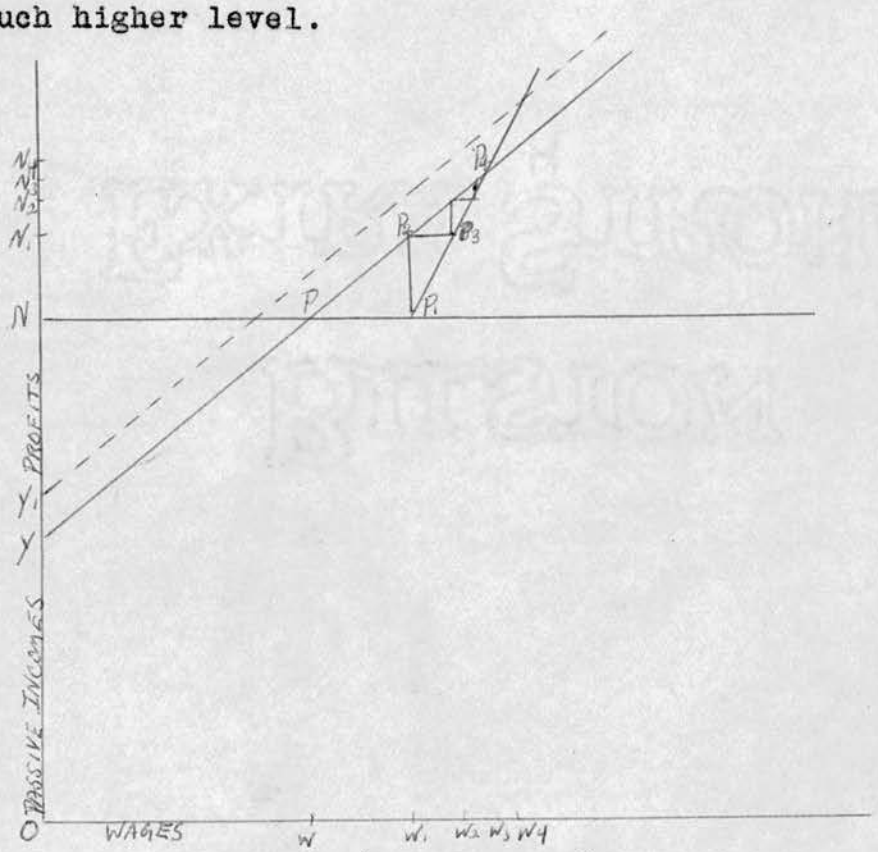


DIAGRAM 4, (Wage Increase)

This constitutes the true wages-prices spiral since, in the assumption, labour is attempting to increase its share of final output at the expense of profits, but only succeeds in so doing at the expense of passive incomes. The result is that both labour and profits increase their respective shares.

Again, in this case, the major force of convergence is the size of passive incomes plus imports. In addition, however, production increases can contribute greatly to convergence by shifting the wage-profits ratio line Y_1P_4, downwards and to the right. As active income sectors increase their shares, passive

income shares will reduce. Thus, if the line YPP4 shifts to the right as fast as active incomes increase absolutely, no price rise will occur. Wage restraint imposed from above or arising from within in the form of longer and more stable wage agreements, will slow up the spiralling process so that plans for technical improvements in production will have sufficient time to mature. This would permit the simultaneous movement of wages with productivity which is so necessary for stable prices.

This second case of rising shares of active incomes shows by its nature that the new equilibrium reached may not be stable. Labour can clearly see that it has improved its real wages by increasing its income. Whereas in the former case, it was defending its real income against rising import costs, it is now in a position to exploit its position. Of course, the same applies to profits. Therefore, should trade unions by watching the profit statements of the employer devote their energies toward gains at the expense of profits, the result could be a perpetual spiral characterized by a constantly increasing slope of the active income ratio line.

The Government's contribution to the spiral is in the form of indirect taxation. This increases the size of active income sectors final output and, hence, the slope of the ratio line, PP_2. An increase in indirect taxation would be shown by a shift upward of the equilibrium price level N. In so doing, active income shares become greater and, consequently, the slope of the ratio line is greater. In diagram 5, the new equilibrium value of N is replaced by the line N_1 as a result of the indirect tax.

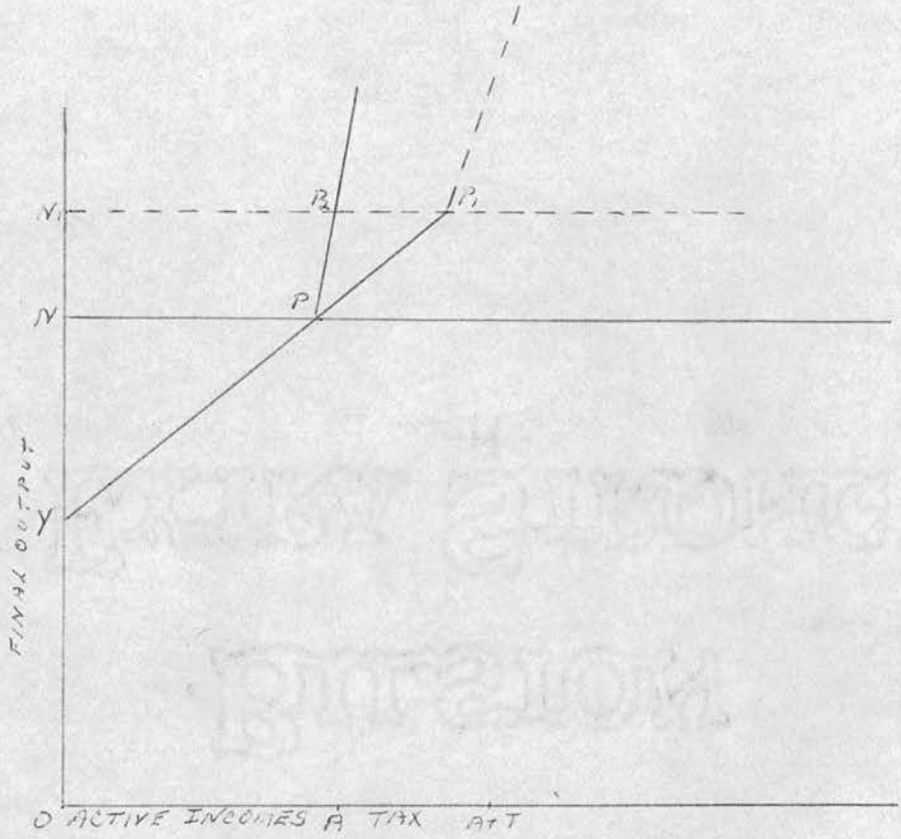


DIAGRAM 5, (The Indirect Tax)

As a consequence, the slope of the ratio line beginning at P_1 is greater than the slope of the line beginning P. Any attempt, therefore, to increase the share of an active income will result in a greater price rise than before the increase in indirect tax. The only possible way for an indirect tax to be anti-inflationary would be for the consumers to restrict their consumption as well as demands for increases in income. Labour, the majority of consumers, would have to be content with passivity of income, a quality not shown in the post-war years. The ratio would, therefore, be nearly vertical such as PP_2.

Lastly, is it possible for the forces which cause the active income ratio line to increase its slope to be sufficiently

strong to result in a divergent spiral ? Diagram 6 shows a case in which no passive incomes exist.

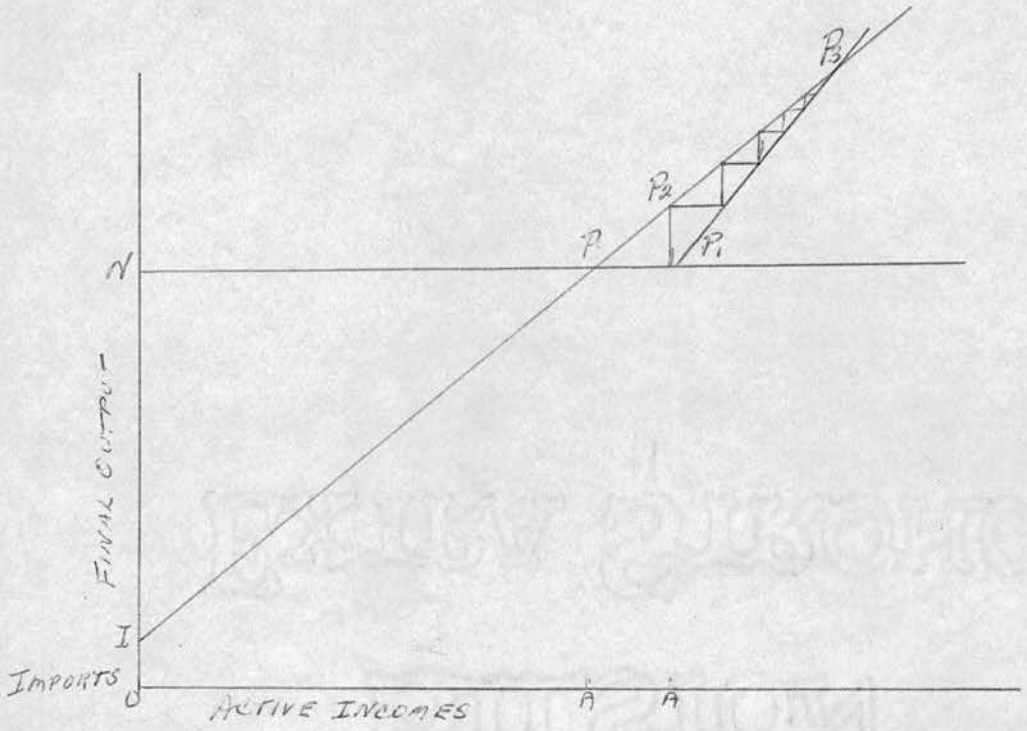


DIAGRAM 6, ("Divergent" Spiral)

The only converging force is a constant cost of imports. Again equilibrium exists at the value N of final output. One active income sector, wages, increases its income so that the total of active incomes is now raised by $AA_1 = PP_1$; should this total of incomes be maintained as a constant ratio a series of new values of N will result, culminating in a considerable increase in the price level (P_3). Hence, the more nearly the slope of the line P_1P_2 approaches 45°, the greater the tendency for prices to rise ad infinitum, and the larger the share of active incomes, the closer to 45° does the ratio line become. For all practical purposes, this would constitute a divergent spiral, since the price

rise would be too great for export markets to be maintained and some unemployment (that is, greater passivity of labour's income), and loss of profits would obtain.

In individual industries, for example the service industries which require a very small amount of imports, such a divergent spiral could be quite possible. Price competition and buyers' resistance would be the checks to such a process. In basic industries, too, such as coal mining, a diverging spiral can result, especially since production increases tend to be rather limited. An attempt by miners to raise wages and increase their purchasing power can, therefore, cause a divergent spiral of wages and prices. Since there are, at the moment, no substitutes for coal and the possibility of coal imports is limited by foreign currency, the inflationary potential of this situation can be great. Rising coal prices can react ultimately on the general price level contributing to a rising cost of living.

b. Income distribution to consumers.

In the same manner, the distribution of final output to consuming sectors can be shown; however, the values will be much more flexible. Instead of fixed passive incomes, their equivalent, external consuming sectors, can vary as much as internal consuming sectors. The analysis, however, follows the same pattern.

First (see diagram 3) on the vertical axis, measure government consumption, exports and fixed capital as OF. As before the total value of final output is shown by ON. On the horizontal axis, OC represents personal consumption.

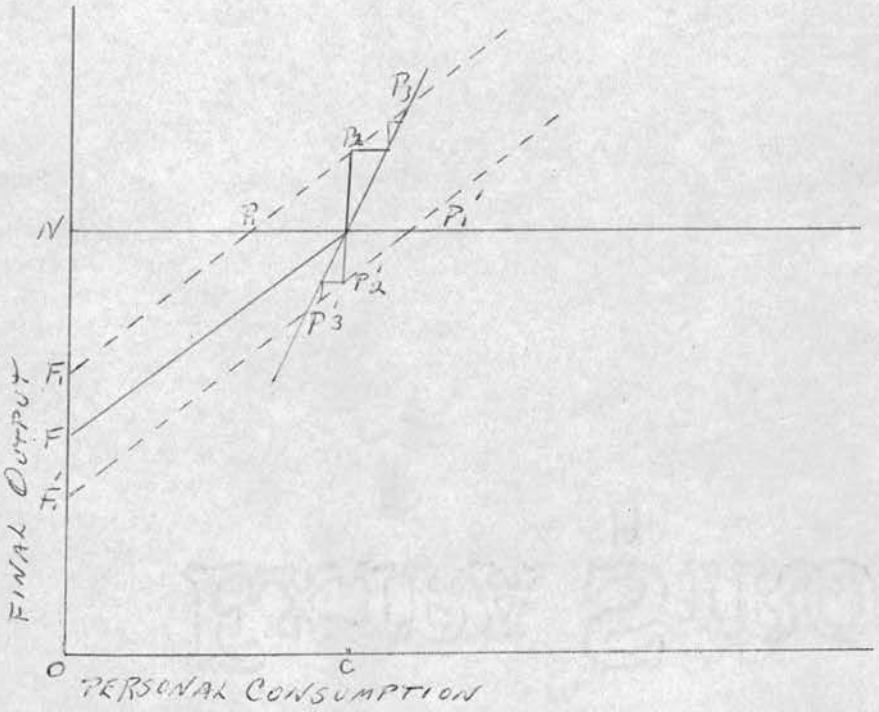


DIAGRAM 7
(Investment Multiplier and Effect of Increase in Output)

A 45° line drawn from F to P (FN=NP) suggests that at a given value of final output personal consumption and other consuming sectors are mutually exclusive. Suppose that fixed investment increases from F to F_1. In order to maintain a constant price level at N, personal consumption must be restricted from P to P_1, that is, personal savings must automatically increase to the same level as investment. However, should personal consumption be maintained in absolute terms, prices would rise to P_2. If the propensity to consume has not changed, the price level (or value of N) will rise to P_3. This is, in other words, the action of the investment multiplier expressed in terms of consumption ratios of final output.

It may be true, as has already been suggested, that a certain value of final output is a prerequisite for fixed investment to

take place. This presumably would result from a rising value of output from the supply side and would apply to the price P_2. At that point, the investment multiplier mechanism would add its effects to that of the wage-price spiral so that both would take place simultaneously with mutually reinforcing results. It becomes easier for wage cost increases to be passed on as higher prices because of the increased level of total demand.

Rises in output per man-hour will again have a similar effect in that, instead of an increase in investment shifting the 45° line upward to the left, it would either not shift so far, remain the same, or fall downward and to the right. This would check the action of the multiplier just as it assists in the convergence of the wages-prices spiral. In this way, personal consumption and other claimants of final output cease to be mutually exclusive since a larger absolute quantity of goods and service are available. The action should be symmetrical downward, as is shown in the diagram, but many practical obstacles to falling prices exist.

Suppose now that the government share of final output increases. Again, this would be shown by a movement upward and to the left of the 45° line. If personal consumption is reduced by an equivalent amount, no price rise can result. This would be the consumption-balanced budget. However, if consumption is not restricted to the same degree as the government share is increased, it can be seen by inspection of Diagram 7 that a price rise will occur. The extent of the price rise will be determined by the slope of the line PP_3 which shows the ratio of personal consumption to final output and the amount that consuming ability is reduced. An indirect tax, if "shifted" to passive incomes by rising wages, will

not reduce consuming ability by as much as government income increased.

Welfare services act to increase personal consumption, assuming that these services would be provided by the consumers themselves were they not "free". Again, this would be shown by an increase in the slope of the personal consumption line, PP_3.

Second (see diagram 8), personal consumption can be included in the vertical axis and investment can be placed on the horizontal. Then the line CP (45^{o}) is much higher than in the first case, suggesting that personal consumption forms a large part of final output. Assume now, that personal consumption rises, perhaps as a result of increased wages, to C1. Price levels can be kept constant only if investment is reduced from F to F_1 (equals PP_1) releasing resources for personal consumption. However, should entrepreneurs in response to the increase in demand maintain their absolute quantities of investment, value of output N will rise to P_2;further, in response to rising demand, if the investment ratio is maintained, value N will rise to P_3, suggesting the operation of a consumption multiplier.

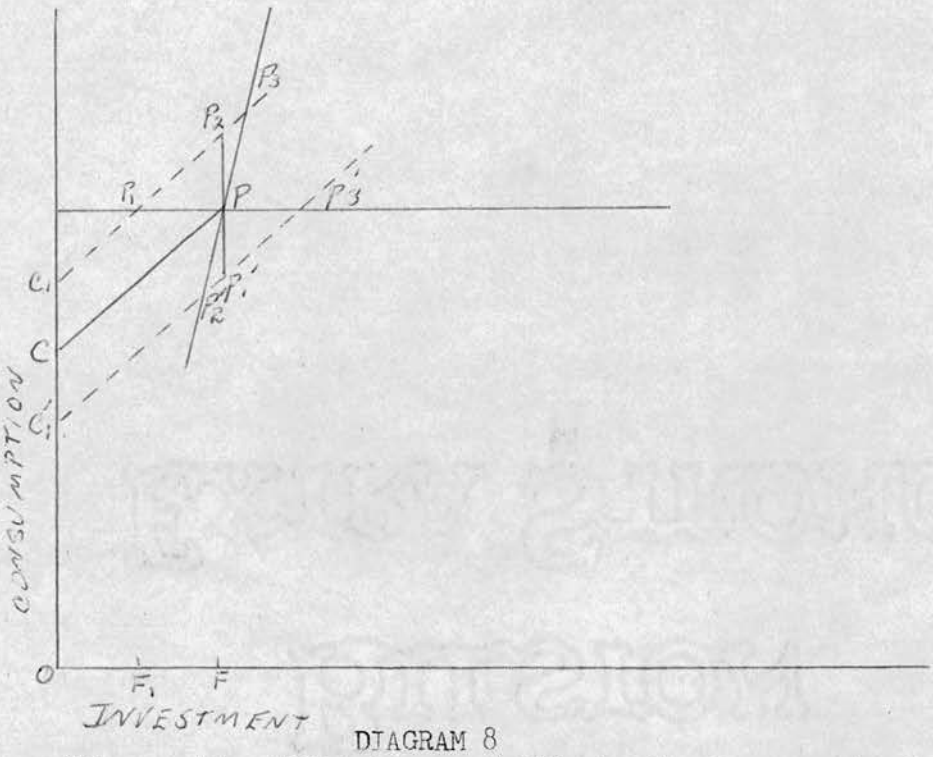


DIAGRAM 8
(Consumption Multiplier and Effect of a Decrease in Consumption)

It can be seen that the price rise resulting from an increase in fixed investment with personal consumption ratios constant is greater than that for an increase in absolute personal consumption with investment ratios constant. This follows (see the discussion of convergence above) from the much higher level of personal consumption than of investment. However, should investment ratios increase in response to the increased demand (the accelerator) the slope of the line PP3 will increase and a still higher price result.

A reduction of consumption without a corresponding reduction of investment can be easily shown in diagram 8 by moving the 45° line down to C_1 P_3 P_1. Theoretically, the new price level should

be symmetrical downward at P_2; however, since the chances of a reduction of the price level are very remote, except in a depression, the value of final output will probably remain at P_3.

More interesting is the case of an improvement in the terms of trade (see diagram 9).

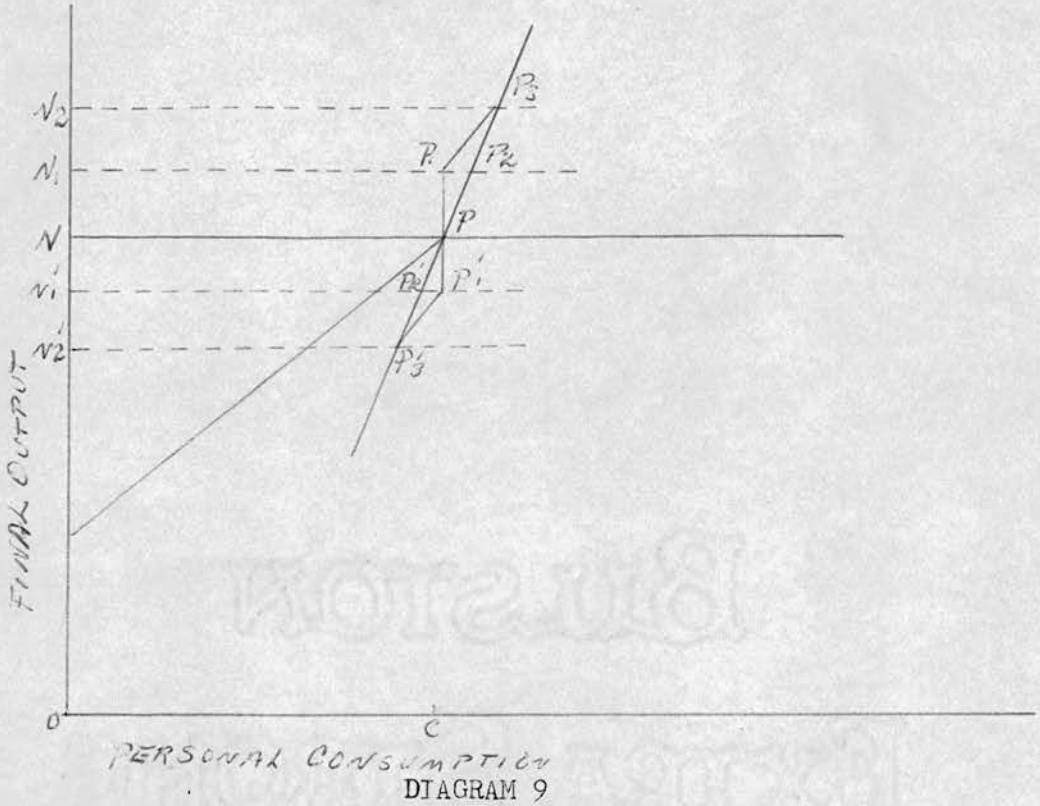


DIAGRAM 9
(Movements in Terms of Trade)

A rise in export prices would be shown by a new value of final output, N_1. If consumers are content with existing absolute personal consumption, this value will be stable at P_1; however, in view of rising profits in the exports industries, wage-earners, as consumers, may demand the same personal consumption ratio as before. If such is the situation, consumption will rise to P_2 and as other active income sectors defend their real consumption, a new level of N (N_2) will obtain as personal consumption rises to P_3. This is, in essence, a "terms of trade multiplier" which will hold true if the personal consumption ratio (or the propensity to consume) is constant.

Suppose that export prices fall. This would be shown by a falling value of N_1 (N_1'), and personal consumption would, at first, be the same as P_1'. Falling wages in export industries should reduce personal consumption further to show symmetry with the upward movement in the case of rising export values so that the value N_2 determined by point P_3 should result. This would automatically correct unfavourable terms of trade as demand for the cheaper export goods rises; however, under current conditions, it is doubtful that trade unions will consent to the reduction in their wages. If so, the value of N would remain at N_1 determined by P_1. Personal consumption, therefore, would be higher than equilibrium level and the excess demand would spill over into the export sector as entrepreneurs find the domestic market more profitable than the overseas. As a result of this, the export sector will fall still further to accomodate the increase in domestic consumption and the new "equilibrium" level of N will be established at P_2'.

The balance of payments will be in deficit, however, and measures will have to be taken to restrict either investment, government expenditure or personal consumption in order to restore the balance of payments if increases in production fail to arise.

The evidence suggests that the post-war inflationary period has been more a spiral of wage costs than a consumption spiral. Table IX, p. 75, shows a steadily rising share of employment income and profits, whereas Table XV, p. 148, shows a constant ratio of personal consumption. Apparently, personal savings are increasing sufficiently to reduce personal expenditure as the distribution of

final output moves in favour of wage earners. Diagram 4, therefore, would appear to be realistic as it fits the current conditions of inflation. In addition, diagram 8, the consumption multiplier, showing personal consumption as an absolute quantity, and fixed investment as a variable with a rising ratio of consumption (measured on the horizontal axis) appears to be true for the demand side. This is not to suggest that demand is satisfied or anything like it; on the contrary, it is already too high to allow the nation to export in sufficient quantity. Investment increases its ratio as personal consumption rises in absolute terms because prices of capital goods rise from the cost side. In this way, investment ratios have increased in response to the consumption multiplier and the accelerator.

As investment increases, it adds its own stimulus to rising prices through the investment multiplier, increasing wages, through competition for labour, and prices as a result of wage increases. The result is an inflationary spiral in which all three stimulants to rising prices are in action.

During depression, it is evident that investment increases will stimulate demand through the investment multiplier with a given personal consumption ratio. Aggregate consumption will rise from P to P2 (see diagram 7) as employment increases and value of final output rises. Eventually, assuming a constant propensity to consume, N will rise to the level of P3 as more factors formerly unemployed increase aggregate consumption. However, once full employment is reached, the propensity to consume cannot be as great as before, and personal savings must rise. To continue an investment policy designed to increase further the value of final

output will be futile as the multiplier ceases to multiply with its pre-full employment vigour. Further investment will simply increase the demand for labour and raise wages and prices.

At this point, the emphasis switches from the investment multiplier to the wage-price spiral. Labour gains a degree of monopoly and demands a wage in accordance with its own pressures whether they be the cost of living, rising profits, or otherwise. As personal consumption rises further, investment will increase in accordance with the consumption multiplier and accelerator in order to meet rising levels of demand. Prices must rise as the value of N reaches such a level that consumption ratios are kept constant with investment ratios increasing (Table XV, p. 150) and greater competition for labour results.

Is there an ultimate end to this process ? The forces of convergence which have been illustrated in diagram form may cease to be as effective as passive incomes become more active and imports fall relatively as prices rise. As suggested before, a surplus of capital equipment may occur as labour becomes more and more scarce. However, long before this can happen export markets will be lost through rising prices. Since 20% of the gross national product is generated by exports, loss of these markets could have a major impact on the economy. This may well be the final check to the wage-price spiral, undesirable though it may be. Otherwise, it appears that the only other successful source of "convergence" would be from labour itself, for to discourage investment by any means available fails to remove a real source of difficulty which is, of course, the wage demands of trade unions.

c. Speed of the spiral.

The last point to be examined is the speed with which the action of the spiral proceeds. Unfortunately, this can only be discussed in general terms since no precise information is available. Any attempt to correlate directly the movement of wages and wholesale prices is quite fruitless since raw materials represent the major portion of costs in industry

Table XXV

Percentage distribution to Factors in 1949 - 1950.

Industry	Raw Materials and Overheads	Reinvest-ment.	Taxation	Dividends	Wages etc
Iron & Steel(7)@	66	2.5	5.5	1.4	24.6
Engineering(12)	60.7	2.7	5.1	1.3	30.2
Chemical & Cement (4)	66.2	3.1	6.8	2.9	21.0
Textiles & Clothing (5)	71.5	3.0	3.5	1.9	20.1
Food Processing & Distribution	86.1	0.8	3.2	1.3	8.6
Brewing (4)	55.3	7.3	11.6	5.8	20.0
Miscellaneous (9)	64.7	2.3	4.8	1.9	26.3
Average	65.3	3.0	5.5	2.1	24.1

@ Parenthetical figures indicate number of firms included.
Source: J. Henry Richardson, op. cit., page 265.

From this table it is obvious that a given fall in raw materials costs can accommodate a rise in wages equal to $\frac{65}{24} = 2.7$ times the percentage fall in raw materials. However, it is not at all so simple as an arithmetic ratio in specific cases since the value of products tends to be much more complex. The individual entrepreneur may price his product on the basis of original cost of raw material and, therefore, a fall in raw material costs will be reflected in prices

until existing stocks are used up. On the other hand, if replacement costs are used for pricing, rising wage costs will be immediately offset by the fall of raw materials. Generally, however, the lag between raw materials and cost increases tends to be about one year (see above, p.44). Since the 1951 peak of imports costs, wage increases have not had any material affect on costs owing to the fall in import costs. Diagram 4 above shows the effect of the combination of both rising wages and import costs as considerably greater than if wages only were rising. In the same way, falling imports can check the effect of a rise in wages rather quickly. At the moment, therefore, it is probably safe to conclude that wage increases have not had any significant effect on prices as yet except in basic industries where wages are the major portion of costs.

The situation would be that rounds of wage increases would first be reflected in the price of basic products such as mining and quarrying in a fairly short time (see Table XI, p.88). The effect of this price rise would be noticed in the processing or "secondary" industries somewhat later depending on the method of cost accounting used. The pressure on profits among these industries would be felt when the cost of new stocks of basic material plus their own wage cost increases becomes so great that prices of consumer goods must rise. Thus, like a concertina, the entire structure of manufacturing is eventually forced to seek price rises all along the way from bottom to top. By the time consumer prices are finally affected, purchasing power is already in the hands of workers to finance the consumer price rise.

It is difficult, of course, to say definitely the length of time required for this process. If prices rises are anticipated and a general inflationary psychology is in evidence, the time required may be quite short. Basic products tend to rise in quick jumps; whereas

consumer products show a tendency to "creep" upward. In actual fact, the movement of consumer prices and wages in the aggregate is a steady one reflecting no particular influence at any one time.

For the time relationship between retail prices and wages, it is difficult again to be precise, but it appears that there is a six month lag between the index of wage rates and the index of retail prices. At no time between June, 1947, and May, 1955, was there a difference of over five points between the two indices if wages are lagged six months. Obviously the time lag will depend on the time taken for negotiation of a wage claim plus the lag between the rise of the retail price index and the moment that wage claims are presented to the employer. Peacock and Ryan suggest the average time required for wage negotiation to be six to seven months.[1] They used a method of sampling of wage claims made within certain industries.

The Sliding Scale agreement is, of course, far quicker in its reaction to the retail price index depending on the number of points variation in the index required for a wage adjustment. A one point rise in the price index which results in a corresponding wage rise is instantaneous, requiring only the amount of time to compile and publish the index.

It is doubtful that the Sliding Scale itself is a major factor contributing to rising prices. By far the larger number of wage increases is due to direct negotiation between employer and trade union. The Sliding Scale Agreement merely defends the existing real wage and makes no provision (unless it is revised) for rising real wages. If such were the general case, there would be no increase in

1. A.T. Peacock and W.J.L. Ryan, "Wage Claims and the Pace of Inflation, (1948-1951)", Economic Journal, Vol. LXlll, June, 1953, p. 385.

real income for wage earners at the expense of other passive incomes. The spiral would converge even more quickly. It is the tendency to "overshoot", to gain wage rises for other reasons than rising living costs that result in forces of divergence within the spiral.

In the aggregate, therefore, there is no definite time period which can be assigned to the movement of cost inflation. Price rises due to wage cost increases are too easily masked by other influences as well as the costing procedure within each firm. Consequently, it appears that it is a continuous process with basic industries, especially those nationalised, increasing prices in a series of jumps which are reflected in other prices along with other costs including wages as an upward climb. This may be accelerated at various times depending upon the circumstances, but the general movement is steadily upward. As the process continues, there will probably be a tendency to gather momentum as entrepreneurs find it relatively easy to pass on cost increases to the next stage of production. Each will be anxious to avoid possible losses due to stock replacement at higher prices and, therefore, will push up his own prices as quickly as possible.

CHAPTER 14.

THE SPIRAL IN RELATION TO TRADE CYCLE THEORY

It will be helpful to set out the theory of the wage-price spiral against a background of modern business cycle theory in order to gain a perspective which ordinarily would be lacking. Many excellent explanations have been offered regarding the cumulative upswing and downswing of business activity, in fact, far too many to discuss here. The important feature of these theories is the fact that each phase of the cycle culminates in a turning point, upward or downward as the case may be, and the next phase begins. Now the difficulty in a discussion of the "self-generating" (or nearly so) wage-price spiral is the apparent failure of the process to precipitate a downturn. Clearly, as suggested above, falling export markets will serve this purpose if prices in other competing nations fail to rise as fast as those in Great Britain. This, however, is a condition imposed from outside the economy, and requires no explanation. Dynamic theory has stressed the fact that the forces which cause a turning point are inherent within each phase of the cycle; evidently, these forces have ceased to be effective during the post-war era.

Since the concern here is with a cost inflation, the turning point at the peak of prosperity is the significant feature - significant because of its absence. On p. 177 above, mention was made of a "ceiling" which imposes a limit on industry's expansion. This is an important point in the theory of J.R. Hicks. This ceiling was imposed by rising costs of investment goods as compared with consumer goods which result from a shortage in relation to the demand for them. This same principle was noted in Table Xl, p. 88.

Wage and profit increases among basic industries and among capital goods producing industries had a much smaller effect on the cost of personal consumption than service or consumer goods industries, even though the proportion of labour in basic industries is high. Hence, an all-round wage increase will cause a greater rise in cost of investment goods than of consumer goods. Ultimately capital investment must become prohibitive in cost if the trend continues and production increases are sufficient to justify the expenditure, that is, the marginal efficiency of capital falls.

Clearly, this depends on the rate of technical progress. Obsolescence can be as potent a factor as depreciation in determining the replacement of fixed capital. Economists have tended to ignore technical changes as an unknown factor which is "given" etc. in constructing theories of trade cycles; however, it is questionable whether this can safely be done in the post-war period of full employment. A good example of this type of theory is that of Mr Harrod.[1] His "natural" rate of growth depends upon the increase in working population and output per head due to technical progress. The natural rate may be accelerated by an increase in saving, but this has the effect of causing a downturn in output if the rate of investment fails to keep pace with saving. Now if to this system is added the "ceiling" suggested by Hicks (or rather a "zone" as he later suggested in which resistances to output increases are heightened) representing full employment, the inherent tendency for the economic system to turn downward is complete.[2] It is possible, however, for autonomous investment to give such an impetus to the

1. R.F. Harrod, Towards a Dynamic Economics, Macmillan, 1948.
2. J.R. Hicks, "Mr Harrod's Dynamic Theory", Economics, May, 1949, p. 106

economy that it can remain in the full employment zone for some time, according to Hicks, until the increased autonomous investment is past.

Now the question to be posed here is what happens if technical progress is so great that labour-saving innovations are introduced in such quantity that a "shortage" of labour never really occurs? By "shortage" is meant the sparcity of labour which results in a level of output that is less than technologically impossible. By successive applications of new labour-saving techniques, which result in a redundancy of a certain type of labour required for immediate production, the ceiling or zone is robbed of its resistance. A surplus of labour for production purposes may exist.

This also reduces the possibility of redundancy of capital equipment, for, as technical progress makes older methods of production obsolescent, new innovations will, if sufficiently labour-saving, reduce the total amount of labour required for production purposes. Obviously, such labour-saving innovations are only labour-saving in the sense that the amount of labour required for a particular stage of production (presumably the final one) is reduced. This means that labour's services will be utilized at earlier stages and made more effective by a more "round-about" method of production involving greater use of natural power. Such methods will inevitable make Hicks' "ceiling" a very flexible one, for as full employment is reached, in the sense that all labour is employed, successive applications of new capital equipment can push the ceiling higher. In Harrod's terminology, the natural rate of growth is proceeding at least as fast as the movement of the trade cycle in its tendency

to turn downward; consequently, the economy remains in the zone of full employment. Because of this and the political implications of anything less than full employment, the trade cycle, as has been shown in the past, may be as obsolete as the capital equipment with which it was concerned. The new horizons which will be opened by automation can completely alter existing economic theory as far as cyclical movements of output are concerned.

If this be accepted, the cause of the difficulty which results in rising prices under perpetually full employment conditions is really a lack of personal saving. While technical improvements in production methods may be very great, it is still impossible to achieve the maximum development of productive capacity so long as investment exceeds saving. The capacity to save is the ultimate determinant of economic progress. If investment exceeds saving prices will rise, with the result that less real investment can be undertaken than at the equilibrium level of savings and investment. To use Nicholas Kaldor's model, the shift of the savings curve does not occur.[3] Since investment is proceeding at a higher rate than saving and the possibility of increased savings does not appear, rising prices result in a retarded real growth.

The fact that personal savings are insufficient is a result of the distribution of income in favour of non-savers. Welfare state redistribution and its effects have been discussed at some length, and when this post-war consuming ability is compared with pre-war "trade cycle" conditions some rather interesting facts emerge.

3. N. Kaldor, "A Model of the Trade Cycle", Economic Journal, March, 1940, p. 78.

Consider, for instance, the years 1936 - 1937 and 1938 when national income was above that of 1929 - rather prosperous years. Rowntree's survey of York showed in 1935 - 1936 that 31.1% of the working population was existing under conditions of poverty, ("poverty" being defined as earnings after rent of under 43/6 per week). Unemployment, old age, and low earnings were the cause of this condition. Further, the investigations of John Boyd Orr found that the diet of 70% of the population of Great Britain was deficient in one way or another. In fact, all sociological surveys made at the time suggest inadequacies of purchasing power among the majority of the population.

However, it was not so much an exploitation of the working classes that resulted in these sub-standard conditions of existence as the failure to utilize all the resources of the nation to the fullest. Wages represented as much of national income then as post-war, and profits before tax show not much change. As taxation of incomes increased as the result of the war, the transfer of existing wealth from savings classes to non-savers meant a greater aggregate consuming power. The sub-standard existence of workers before was in effect the saving necessary to bring the boom stage of the trade cycle to a close. In 1938, for example, 60% of total allocated incomes was earned by wage earners under £250 per year. This condition produced an amount of savings equal to about 5% of the gross national product. In 1954, with 79% of total incomes under £1,000, the same percentage of gross national product was saved.

Table XXlV

Distribution of Allocated Personal Incomes by Income Groups before and after Tax.

Income Group	% of total before tax 1938	% of total after tax 1938	% rise or fall 1938	% of total before tax 1954	% of total after tax 1954	% rise or fall 1954
up to 250	60	64	+ 6.7	11.8	13.1	+ 11.0
250 - 500	14.4	15	+ 4	26	29	+ 11.5
500 - 750	5.35	5.2	-3	29	30.8	+ 6.0
750 - 1,000	2.9	2.7	-7	12.2	12.2	0
1,000 - 1,500	3.6	3.2	-11	6.9	6.4	- 7.3
1,500 - 2,000	2.05	1.77	-13.5	2.95	2.5	-15.25
2,000 - 3,000	2.56	2.14	-16.5	3.18	2.5	-21.5
3,000 - 5,000	2.9	2.24	-22.7	2.95	1.94	-34.3
5,000 - 10,000	2.82	1.92	-32	2.26	1.14	-49.5
10,000 - 20,000	1.74	.96	-44.8	1.05	.36	-65.7
over 20,000	2	.98	-51	.565	.101	-82.2

Source: National Income and Expenditure, 1955, Table 28.

Now if the sociological studies are correct, in 1938 an income of £250 was barely sufficient for a family of average size. One could hardly expect much personal saving in that income group. However, this group increased its share of income from 60 to 64% of allocated income after tax. The saving income group would start presumably within the £250 to £500 range, that is, 36% of total allocated income after tax would be either spent or saved.

In 1954, the picture is quite different, for 85% of income after tax falls within the 0 - £1,000 income group. This, according to the Cost of Living Advisory Commission, represents practically all wage earners and most salary earners. This means that the "saving group" of the trade cycle era has only 15% of income after tax to spend or save. It can hardly be expected, therefore, that the savings curve of Kaldor's model of the trade cycle will shift very quickly.

To this redistribution by direct taxation must, of course, be added the welfare benefits received. In 1925, workers paid 85% of the cost of social services in taxes, receiving more back than was paid in, and in 1935 79%.[4] Considering that this latter year was characterized by high unemployment, a good deal of these contributions by workers would be paid to their own group. In 1954, with no unemployment, workers paid in direct taxes only 55.3% of the welfare benefits received (see above, p. 162). Again, this suggests that consumption must be high among the working class or "non-savers". In fact, the only way to equal the savings of pre-war would be by raising the value of final output to such a high level that personal savings will wither be forced or incomes will be high enough to allow a margin for thrift.

As to the source of these wage incomes, further comparison with pre-war can be made in the form of wage rates and wage earnings.

	1924	1929	1932	1934	1935	1936	1937	1938
Wage Rates	100	96	90	90	90.5	94	98.5	99.5
Earnings	100	98	89	93	97	98.5	102	103

Source: A.L. Bowley, Studies in National Income, pp. 62 - 63.

When these are compared with post-war figures (Table XXll, p. 216) the results are quite startling. Of course, allowance must be made for the reduction of the working week which has increased earnings even more; however, the general trend of income being distributed to the working class is still valid.

In addition, one must include the enormous political pressure which refuses to permit anything but full or nearly full employment.

4. C.L. Mowat op. cit. p. 492.

Trade Unions, in their capacity as guardians of the welfare of their members, will hardly tolerate unemployment to any degree. Strike action is far too potent a weapon to be ignored by any government.

These appear to be the major differences between the pre-war trade cycle economy and post-war full employment. It is these differences which the trade cycle theorists appear to have overlooked. Harrod was concerned, among other things, with the possibility of secular stagnation with the rate of growth of capital exceeding the rate of increase of consumption. This would lead to a reserve of unemployment as population growth and labour-saving investments lead to a redundancy of labour. This excessive rate of growth of capital goods occurs because of a surplus of saving, and is, therefore, required for the maintenance of full employment. It seems quite logical to argue in an opposite fashion, that is, that a deficiency of saving will be the general rule. On page 180 this argument was presented in rudimentary form and was based on the assumption that savings are forced on certain sectors of the population which represent passive incomes. Comparing post-war conditions with pre-war, 40% of the national income devoted to wages was inadequate for a reasonable standard of living before the war. A large proportion of the other 60%, therefore, could be comfortably saved. The real savers, however, were the wage earners who were forced to save by prices too high for the standard of living they wished to enjoy. Currently, this 40% of national income is much more adequate than in the past since 79% of personal income before tax is in the hands of workers as compared with 60% before the war. The structure of taxation and welfare benefits simply adds to the consuming ability of wage earners. Voluntary saving may occur within this income

group since wage earners are now an active income sector; however, the real forced savers will be other passive incomes, whether the saving constitutes doing without a new Rolls-Royce or a pack of cigarettes for a pensioner.

This approach to personal saving makes all the difference between the "trade cycle" and the "full employment" analysis, for, as suggested on page 180, price rises are essential for an increase in saving in some form. This explanation seems to fit more closely the facts of the post-war situation, since there has been every evidence of over-consumption and rising prices. Long order books for capital equipment suggest the perpetual excess of investment over saving with the result that the ability to produce new capital goods is incapable of supplying the demand. Apparently, what is needed is to restrict consumption until such time as the supply of capital goods is great enough to increase the production of consumer goods.

As stated above, technical progress which renders older machines obsolete and labour for production redundant, does not necessarily mean redundancy of capital and labour in the aggregate. Capital saving and labour-saving innovations of themselves are not sufficient to produce unemployment but will merely cause a shift of employment. As long as physical human energy is displaced by natural energy, the human mind will be required to direct the operation of that energy. In this way, technical progress can keep pace with the increase of population and no redundancy of labour need occur.

However, when the human mind itself is displaced by automation, the problem may be very different. It is, for instance, inconceivable that the labour displaced on an assembly line by automation could be utilized in manufacture and repair of an electronic brain. In this way, a surplus of labour may arise, but, since the difficulty is

foreseen well in advance, future plans can be made which may, for instance, involve a shorter working week with no loss of pay; hence, demand for personal consumption need not be outstripped by supply.

The rising cost of capital goods as compared with consumer prices must eventually cause a slackening of the pace of investment unless the productive advantage of the new technique is so much greater than the old that further investment is still profitable. Again this appears to have been a characteristic of the full employment economy with a high consumer demand.

But, most important of all (see p. 76 above), is the revolutionary change of the social conscience. Labour's transition from a passive to an active income has brought with it an awareness of welfare concepts which guarantees a minimum standard of living. This, above all, has ensured a higher degree of consumption than the domestic productive capacity can support. The distribution of income shown in Table XXIV for 1954 will undoubtedly be a permanent feature of the economy. It can be seen in the table that incomes of £1,500 and upward lose a greater percentage of their shares of total allocated income than in 1938, and, as incomes rise, this loss of share becomes considerably greater. This new distribution by direct taxation has been accepted by the losing classes practically without objection; hence one can assume that it is permanent.

For these reasons, therefore, the trade cycle, as has been known in the past, is probably a matter of economic history. Trade cycle theorists whose econometric methods of analysis have shown mechanically how the economy fluctuates about an equilibrium level because of the magnitude of certain coefficients have always been forced to take as given the factors which are really the most important. Assumptions have been made about these factors which have

rendered them ineffective as far as the solution of the models is concerned; yet it is here that the greatest amount of research remains to be done. The redistribution of wealth and its effect on consumption and saving, technological progress which outstrips the tendency to over-accumulate capital, and autonomous investment which, in effect, means new roads, schools, slum clearance, etc. are all determinants of the national income which cannot be fitted neatly into an econometric model. On the contrary, the problem facing the nation no longer is the trade cycle with the enormous waste of human and natural resources; these can be put to work, if necessary, by the simple expedient of digging holes and filling them up again. It is really a question of the most advantageous use of these resources so as to maximize productive capacity and satisfy the demand of consumers which has been increased by a more equal distribution of wealth.

However, the problem still remains of where the necessary ex ante saving is to come from in order to stabilize the price level and permit the optimum growth of productive capacity. Since under "trade cycle" conditions of full employment, wages represent approximately a constant proportion of national income, except over long periods, it follows that increases in labour's income is inflationary. Redistribution through taxation will serve to aggravate the inflation so that, according to the above analysis, prices, or value of final output, will rise until forced saving takes place.

CHAPTER 15

A PLAN FOR FULL EMPLOYMENT

The problem facing Great Britain, as well as other nations, is how to remain in the zone of full employment and secure a measure of price stability. In the face of rising import costs, this problem was exceedingly difficult, although for Britain with its high proportion of basic material imports, it was not so difficult as for other nations that are consumers of foreign manufactured products. However, for Britain, the balance of payments complicates the issue considerably since capital goods for home expansion of productive capacity directly compete with the export sector. Further, since production increases are most effective in absorbing both rises in imports and wage costs, the means of expanding production is for the moment mutually exclusive with exports. It is essential, therefore, that every advantage be taken of favourable terms of trade in order to expand productive capacity.

It would be a mistake to attach too much significance to rising wages alone as a single determinant of the price increases. It is rather a combination of many factors of which wages are only one. The danger point is reached, however, when other incomes, hitherto passive, demand increases and add further pressure to rising prices. In this way, an important converging force can be lost. In the post-war period the combination of both rising import costs and wage costs has forced higher prices.

What is most important to the economy is that it remain within the full employment zone. The nation cannot afford either unemployment or inefficient employment and the consequent waste of productive power. Consequently, it is vital that a comprehensive plan for full

employment be designed and put into practice.

a. Control of import costs by buffer stocks and subsidies.

The essentials of such a plan are already inherent in the discussion of the various components of both production and consumption. It appears, however, that it would be a mistake to permit the complete operation of market forces of supply and demand to determine the price level. Some centralized control and planning seem essential. Consider, first, the effect of fluctuation in cost of imports. Since Britain is largely an importer of basic materials, excessive fluctuation of the prices of these commodities means for the individual manufacturer stock appreciation at one time and depreciation at another. As appreciation means loss of profits without corresponding price increases, so depreciation means an excess of profits. It becomes extremely difficult during times of rising costs of imports to finance new stocks, pay taxes, and still have sufficient left for dividends. Also, during periods of falling import costs, a surplus of funds may exist which may be applied to liquid reserves only since a falling off of demand may be anticipated. Industries dependent on export markets will no doubt discover their own markets failing during such a period. In this way, a trade recession may be intensified by overcaution on the part of entrepreneurs.

It would seem to be advantageous, therefore, for the government to maintain a stockpile of commodities which can be increased during a period of falling import costs and decreased by selling to manufacturers during rising costs. This would have a stabilizing influence on the price level of stocks and reduce the risk involved in evaluating private stocks. Traditionall, this has been the function of the

speculator who had sufficient funds or credit at his disposal; however, post-war developments have so increased the degree of price fluctuation that the individual buyer can no longer cope with it. Such a government enterprise would no doubt require international agreement, but some accord should be possible with the producers of primary goods. These producers would have much to gain since the inflationary pressures within their own countries grow as incomes from exports rise. Further, as prices for basic commodities fall, the primary producer would be assured of some market support for his products.

By operating through the market mechanism, private buying of basic commodities can be continued. This would permit the maximum use of the private trader's knowledge and skill, for he would not be obliged to buy from government stocks if he could find a cheaper source of supply. Harrod's suggestions for buffer stocks on an international scale were principally designed for cushioning the cyclical tendency toward falling prices in a slump which he considered as inevitable during the process of economic growth.[1] However, his plan involves the inclusion of stocks composed of processed articles which "could be held in stock without danger of obsolescence". It seems that without going to such lengths as this, much could be done toward contra-cyclical policy by confining stocks to basic materials which are of strategic importance.

As Harrod suggests the size of buffer stocks would have to be unlimited to maintain prices at a constant, or slowly rising price level. Only in this way could confidence in future costs of

1. Harrod, op. cit., pp. 123 - 128.

commodities be sufficient to minimize the risk of entrepreneurship. Under more realistic circumstances, it is doubtful that such size could be attained, nor would it be wise to do so. What is possible, however, are stocks of sufficient size to reduce the shocks of basic commodity price fluctuations. Efficiency of use of high cost commodities would be encouraged if the government stockpile were large enough to "predict" a price rise for industries some months in advance. This would make possible planning of production which could allow for future cost increases; hence, it would reduce the risks of production and contribute to domestic price stability. The greater the size of the stockpiles, the greater the security obtained.

The problem of exceptional price movements such as the Korean price boom may prove too much for buffer stocks to solve. In such a case, when stocks are not sufficiently strong, the only other recourse would be to the subsidy. In a few instances prices have shown no tendency to return to anything approaching the original level. The long term trend has been steadily upward with no sign of any change. Obviously, stocks of these materials cannot offer a solution since only the cyclical humps can be smoothed with an allowance for a slight secular upward or downward trend. What is required in this case is a readjustment of the production process so as to accommodate the rising cost of such commodities. Economies, not only by using cheaper substitutes and less of the expensive material, but also in all phases of production, must be found so as to avoid the price increase to consumers that ordinarily would result. These, however, require time. The planning of the production process is such that new and cheaper techniques cannot be introduced at once.

The use of the subsidy, therefore, would assist industry in its changeover by keeping the cost of the necessary commodity sufficiently low to avoid a price increase of the final product and sufficiently high to encourage economies. The subsidy should, furthermore, be an ever decreasing one with cuts introduced as industry becomes more capable of absorbing the rising cost of the commodity.

It was argued above, p. 195 , that the low price of coal encourages waste. The market price of this scarce commodity should be high enough to force the most economical use of this resource. The opportunities for economies in the use of coal through efficient methods of burning are very great, but are not so for basic commodities. Poorer quality of final product often results from excessive direct economies in the use of raw material. In the case of coal, the "subsidy" is wasteful, but a subsidy for imported commodities could pay for itself in the resulting stability of the price level in much the same way as was suggested above, (p. 83), for food. For other commodities whose price movements are more subject to cyclical fluctuation, the buffer stock principle should be adequate.

Measures of this kind would greatly assist industry in the planning of production. Stability of raw material costs are as important as stability of wage costs and the security resulting from a reasonably guaranteed cost of raw material would contribute to price stability. This follows from the argument developed above, pp. 111 - 112, that security is an important determinant of the price level.

Many practical difficulties are involved in such a system of

subsidies. The problem of which commodity to subsidize is, in itself, great enough to give rise to considerable controversy. A double criterion of relative importance to the national economy and the amount of price movement sufficient to merit subsidization would have to be applied. It may be argued that some industries would benefit more than others, but since profit margins generally will tend to be unaffected, this should present no great obstacle.

Obviously, the major difficulty to be overcome in the setting-up of buffer stocks is the foreign exchange with which to make the necessary purchases. It may be that the subsidy is at first necessary to attain sufficient price stability to ensure a favourable balance of trade. If financed by direct taxation, such a subsidy would possibly bring about the necessary personal saving to improve the balance of trade. However, this is a problem of the government to solve.

b. Characteristics of full employment.

In addition to a policy designed to control import costs a fundamental plan for domestic wage and price stability is required. Indeed, this is probably of prime importance, for the balance of trade will tend to correct itself once internal inflation is controlled.

It has been argued above, p. 264 ff., that the trade cycle such as has been known in the past will cease to be of any importance in the post-war economy. Trade union bargaining power and redistribution of income are principally responsible for this. Minor cyclical movements are, however, quite likely, but need not result in chronic unemployment such as in the decade of the thirties. If this is true, there is a far greater danger of chronic inflation due to excessive

wage demands during full employment.

First, a definition of full employment should be agreed upon. Employment will be considered full when the state of the labour market is such that employers will find it profitable to employ all the available labour forces at the current wage.[2] This definition is perhaps more appropriate to a discussion of a cost inflation than is that of Ohlin who emphasizes the side of demand. Certainly, Beveridge's full employment would more likely be overfull employment as employers will find it profitable to offer higher wages in order to expand their labour staff. In such a condition, too, the balance of payments will deteriorate as demand exceeds domestic supply. Further, the element of demand is included in the above definition in that personal consumption will probably remain constant at full employment and rise if employers find it profitable to maintain their labour force at an increasing wage.

A possible objection to Ohlin's definition is the fact that aggregate demand equal to domestic supply does not include the possible isolated pockets of surplus or insufficient demand for labour which result in prosperous and depressed areas. Rising wages, can,

2. Two other definitions of full employment should be suggested. "It (full employment) means having always more vacant jobs than unemployed men." Beveridge, Full Employment in a Free Society, p. 18. "Full employment is the degree of employment that exists when the aggregate demand for commodities is at the highest level that is compatible with the condition that demand at existing prices is balanced by current domestic supply." B. Ohlin, The Problem of Employment Stabilization, Oxford University Press, 1950, p.5

therefore, exert pressure on the general price level even though aggregate demand is equal to aggregate domestic supply. Thus, something less than full employment may be necessary for a stable price level depending on the distribution of employment throughout the country. Certain prosperous industries that require more labour may exert a stronger upward pressure on the price level than the stabilizing or downward influence of depressed industries. In this way, a general price rise in prices must occur as the less prosperous industries are forced to compete for a limited labour supply even though it may be unprofitable for them to raise wages. The evidence, therefore, of full employment appears before unemployment is completely eliminated, depending on the structure of industry and labour within the nation.

This state of full employment is not at all to be deplored if all the labour resources of the nation are efficiently utilized. Ultimately, the profit motive should encourage the introduction of labour-saving innovations, especially as the pressure of competition in the export industries requires the most efficient application of labour. However, while labour's mobility in the sense that labour will not move to areas where it can be most effectively applied, may be low, there is a tendency to shift from job to job, increasing the turnover of labour. One would expect, therefore, the economy to become less adaptable to change, less flexible as new industries will find difficulty in expanding for lack of labour, and symptoms of over full employment appear.

The distinction between full and over-full employment is necessarily a fine one. It is practically impossible to determine at what point over-full employment exists. If it is assumed that full employment is an equilibrium of supply and demand such that

all employable workers are utilized, there will be constant danger of a movement toward over-full employment due to the differential nature of the economy. As an industry finds it profitable to expand further, it will attempt either to increase its physical plant by investment or to entice labour from other industries; hence the economy slips into over-full employment. At this point, shortages of material appear, order books become full, and the balance of payments deteriorates, all symptoms of excessive demand.

It is, therefore, the lack of flexibility of a full employment economy which appears to be a major difficulty. Hitherto, the free play of supply and demand of the labour market was sufficient to permit natural growth, and labour was sufficiently mobile to respond to the wage incentive. Regarding this, Meade suggests that " ... the restoration of the supply-demand mechanism is essential for two reasons". The first of these was the avoidance of the wage-price spiral and the second was for the attraction of labour to its most efficient use.[3] The post-war attitude of trade unions has already shown clearly wh y the free labour market is a matter of history. Clearly, the membership does not want wage payments, which represent their means of livelihood, to be subject to economic forces outside their control - doubtless with good reason.

Meade then suggests that unemployment should be great enough to reduce the monopoly power of trade unions, whatever that may be. This would be the result of government action through fiscal policy, control of the interest rate etc. Again, this is highly questionable in view of labour's demand for constant or rising real wages. Since the

3. J.E. Meade, Planning and the Price Mechanism, Allen & Unwin,Ltd. London, 1948, p. 69 ff.

monopoly of labour is virtually complete under full employment, the employer will be faced with "all or nothing" production, that is, he will utilize all his existing staff, or face a complete shutdown because of a strike, boycott, etc. Indeed, considering the pressures and strains of the organized labour market, it may be that an unemployment rate that is too high to be politically desirable would be required to break the monopoly power of labour. In this connection, Meade suggests 10%, a figure that is doubtless above the "political limit".

Further, Meade insists that wage rates must not be tied to the cost of living.[4] But the plain fact is that they are and there is little anyone can do about it. One can argue on the basis of economic principles that no free labour market can exist if real wages are protected, and also that international price movements of food will result in corresponding domestic price movements to the detriment of the exports trade. This, however, is precisely what has happened and will continue until some other welfare-ethical concept replaces the socialist principles currently popular. So long as the drive for security remains the major stimulus to labour's action, there will be no change in the demand for constant or rising real wages.

Is it possible to have a free market economy based on the price mechanism for goods and services without a free labour market ? The complete answer to this question like so many other will require time. The post-war period, however, has not shown a very good record. Price stability with a free market for goods with a pre-determined wage rate has as yet not been attained. In actual fact, since wage earnings are so much in excess of rates, and earnings are determined by the individual employer and employee, a free wage market does

4. Ibid, p. 73

currently exist. The wage rate is, in effect, a "floor" below which wage payments will not fall. Above this minimum, the wage market is free to operate. It so happens that market pressures are so great that the employer is forced to make attractive offers to his employees so that, as wage rates increase in response to rises in the cost of living, total earnings do likewise. This, however, is not due directly to the existence of the minimum wage rate.

The real test of the system will come when demand is sufficiently relaxed that wage earnings will be equal to or only slightly more than wage rates. At this point entrepreneurs will be forced to pay the rates determined by the cost of living in the face of falling demand for their products. Under these circumstances, it may be impossible for production to be carried on profitably, and some unemployment may result. Government action in the form of lower taxes, lower interest rates etc., may, therefore, be required to stimulate flagging demand.

It may well be that the cost of living wage rate will be sufficient to maintain a large measure of effective demand; hence, according to Keynesian principles, it will greatly assist the preservation of full employment. In this way, the downward spiral may be arrested before it has hardly begun. On the other hand, it may result in much greater unemployment as industry becomes less able to pay the minimum cost of living wage. This, however, is unlikely unless the propensity to consume falls.

However, once the inflationary pressure of rising import costs is removed by buffer stocks (or good fortune), the chances of a stable price level in a free market with extra-determined wage payments should be quite good. This could be greatly helped by a system of food subsidies as suggested above (p. 80 ff.). Rounds of wage increases

caused by a food

caused by a food price increase in one period can, if the ensuing price rise coincides with another food price increase, result in a perpetual spiral which will have all the appearance of divergence especially if passive incomes become more active.

The objection to food subsidies has been that they are wasteful by providing cheap food for both rich and poor, and that the same amount of money could be more efficiently applied by increasing social services. This argument is valid, of course, if food prices are kept well below the average of other consumer goods, but it is clear that labour itself prefers the security of real wages to welfare assistance. Accordingly, food prices should rise only at the same rate as other goods which make up personal consumption.

It has been further argued that food subsidies encourage waste of a scarce commodity.[5] It is hardly feasible that waste should be any greater with the lower price of food and correspondingly lower wage rate than with a higher food price and higher wage rate. The "real cost" is just the same. At any rate, not much can be done about the cooking habits of housewives unless a programme of education were inaugurated.

These, therefore, are the basic fundamentals which must be accepted in planning for full employment, for it is quite futile to attempt to change institutions which have become permanent. To summarize, the following appear to be the major characteristics of the full employment :

1. Unstable equilibrium - there will be a strong tendency to slip into over-full employment since the quantity of aggregate domestic demand and supply conceals isolated areas where either a

5. Meade, op. cit., p.41

surplus or deficiency of demand may exist. The employer will find it profitable to offer a higher wage in one industry in order to increase his labour force, while in another demand will be such that the existing wage and labour supply is the inadequate.

2. Inflexibility of employment - labour mobility (as opposed to job switching) will be reduced to such an extent that new and growing industries cannot secure sufficient labour for expansion.

3. A strong monopoly of labour - this means that wages are determined by influences outside the industry concerned. The only free wage market left is the surplus of earnings over wage rates.

Ideally, under full employment, supply of capital goods should be equal to the demand for them. Once over-full employment appears, orders for new means of production will increase, and if the capacity of the supplying industry is insufficient, order books will grow. The balance of payments will also deteriorate as greater imports of raw material will be required to meet the increasing demand. All indications are, therefore, that currently Great Britain is suffering from over-full employment and the consequent inflation of both wages and prices. It would be a mistake, however, to apply Meade's solution to the problem by increasing the level of unemployment to 10% of the labour force assuming that is the necessary figure. This could be done, of course, at the risk of political upheaval, but another method may be more advantageous from the standpoint of welfare as well as political stability.

c. Nature of full employment planning.

The importance of saving during a period of full employment has already been pointed out (p. 267.) A lack of saving means an excess of consumer demand which precipitates the economy into an

inflationary condition of over-full employment. This occurs as the result of the depletion of stocks and the demand for labour to replenish them. It has been argued that prices will rise until forced savings take place since the income redistributed by progressive taxation and welfare benefits is now in the hands of heavy consumers. Clearly, to expect voluntary saving on the part of workers requires a stability of purchasing power which has not, since the war, appeared. No individual small saver will refrain from purchasing goods now if the postponed consumption will buy less in the future. The best "investment", in this sense, is consumption. The result is a self-generating movement into inflation. As wages rise in response to the attempt to satisfy high demand, the consuming power itself is further increased.

There is, of course, very little hope of breaking this circular relationship through the encouragement of voluntary saving as long as price rises are anticipated. Further, to raise income taxes sufficiently to accrue a surplus may reduce the incentive to produce since the fundamental purpose of working is for consumption in the present or future. This method would be unsatisfactory if, in order to stabilize the price level, it were necessary to make the income tax so steeply progressive that the worker's net income failed to compensate for the disutility of work. Indirect taxation may succeed if the workers agree to wage restraint or if wages are frozen by government directive. In this way only can consuming ability be compulsorily reduced.

Rising interest rates, as has been shown, can check investment in long-term projects, although some doubt has been expressed of the

wisdom of this method of control.[6] This method will release a share of final output for personal consumption or for export at the expense of future production. Further, in a cost inflation there is no guarantee that wage payments will not continue to rise since the only possible stabilizing effect on wages would be the labour surplus which would be released by reduced investment plans. The amount of reduction necessary to secure this result may be below the minimum necessary for replacement of depreciated capital and the provision of new investment to sustain the normal rate of growth. Since the tendency for the production process is to require more fixed capital than in the past, this minimum may be rising and measures designed to check investment may do more harm than good. A falling rate of interest over the long term may be required.

These orthodox anti-inflationary measures will be effective under "trade cycle conditions" principally by causing unemployment; indeed, it is quite possible that they could still do so, if applied for a sufficiently long period. Little would be gained, however, since some productive capacity would become idle and the burden of welfare benefits would grow. Therefore, if these measures are rejected as full employment stabilizers, something else must be suggested which would be more effective in attaining price stability without unemployment.

6. Harrod suggests that the cost amortization is so great that a rise in the interest rate will have small effect. In housing, maintenance costs, heating etc. are the main determinants of investment, and interest plays a minor role. Towards a Dynamic Economics, p. 133.

This, as already suggested, would be a plan which must restore sufficient confidence in the purchasing power of currency to encourage personal saving as well as furnish the degree of security required by both trade unions and industry. One must assume that trade union leaders are reasonable men and are aware of the inflationary implications of wage demands; however, if no alternative is offered, they will put forth claims as the general price level rises. In the same way, the employers will have no other choice than to raise the prices of their products. Both will consider their own welfare above that of the nation if a conflict of interests should ensue.

From nineteenth century laissez-faire and its fundamental conflict of interests between labour and management, a tendency toward organization has developed which has resulted in trade unions on an industry-wide scale and counterbalancing employers' federations. The purpose of these organizations has been to strengthen each side in their mutual relationship. It would appear to be only one logical step forward if these great organizations were to join with the government in an attempt to construct a plan for the economy as a whole. Responsible representatives of all the major organizations could be brought together along with the government representatives to form an annual economic conference. The requirements of the nation could then be discussed in full in relation to the productive capacity. Major investment plans of private industry could be presented and both the means of finance and the supply of labour could be compared with the amount of basic material available and the physical capacity of the industry or industries involved in construction. Government expenditure, as well as investment in nationalized industry, could then be adjusted in advance according to the productive capacity of the nation

at full employment.

At the same time the needs of labour could be considered. It should be possible to arrive at an estimate of the amount of consumer goods and services available during the coming year as well as the demand for them. Likewise, the price level of these goods could be forecast (especially if food subsidies are included in the plan for full employment) and the appropriate wage level decided upon. At this time industry could also present its case for the margin of profit which it considers necessary for successful conduct of its business. It should also be possible to decide, in general terms only, the ability of industry to pay the wages of its employees. Future productivity trends could be included in this decision.

From the government side, the nature and structure of taxation in relation to the general economic situation could then be arrived at. The balance of payments situation could also be reviewed in the light of the investment plans of industry and the future wage claims of trade unions. In this way, all sectors of the economy could feel that they had a stake in the future of the nation since they were represented at the annual "economic conference" and that taxation burdens were in existence for a purpose and not to be shifted.

Is this truly a "flight of fancy" ? It need not be for all the necessary ingredients are currently in existence. An excellent statistical department furnishes annually the national income figures as well as numerous other indicators of the state of the economy. Also, since the necessary organizations are already in existence, all that would be required would be to make the attempt. It could hardly be expected that such an economic conference as is suggested could take any disciplinary action in the event of failure on the part of any group to meet its commitments. The penalty of such a failure would be rising prices of over-full employment.

Such a plan need not supercede the market forces of supply and demand. No such all-embracing scheme need be attempted so long as the market is capable of performing its function. In reality, a plan such as this would assist the market forces by achieving equilibrium more quickly and with less differential movements of price levels among the various sections of industry. It has already been shown (p. 88) that prices among basic industries tend to rise more quickly as a result of wage increases than among consumer industries. This of itself will tend to cause over-full employment as fixed investment becomes more expensive and wage incomes rise in relation to consumer prices. Centralized planning could allocate scarce supplies of capital goods to their most advantageous use and achieve the maximum degree of productivity with the minimum price rise.

As fixed capital tends to become more essential to the production process, the difficulty of achieving full employment becomes even greater. Cyclical movements of investment and reinvestment will become more characteristic of the economy. Consumer durable goods as well will cause fluctuations in consumer buying. Again centralized planning could make possible the anticipation of such fluctuations, and assist in the movement of scarce resources so as to avoid price rises among certain industries.

The practical difficulties involved in such co-operative planning are, of course, tremendous. However, if properly approached, some measure of economic stability should be attained. For example, entrepreneurs plan their future course of action as well as do trade unions and the government; hence it is a matter of co-ordinating these plans into an intelligent policy. Further, such planning need not involve yielding company secrets which may jeopardize a company's competitive position. A statement of investment plans of, say, the

Rootes Group, for a period of time and an approximate amount of basic material required is really all that is necessary. Likewise,a statement regarding the plans for the Transport and General Workers Union for minimum wages for the coming year need not necessarily commit the Union to press for these wages. They could, however, be reviewed by the commission as a whole in the light of industry's ability to pay as well as the possible effect on the export trade of consequent price increases. In this way, assuming that leaders of trade unions and employers' federations are reasonable men, advice could be carried to the individual union and industry concerned. The final judgement on the advisability of certain actions would, however, be left to the individual organization or group concerned so as to preserve democratic traditions of freedom. But the very existence of a suggested plan for full employment would give an alternative to the chaotic survival-of-the-fittest technique which leads to rising wages and prices in a perpetual upward spiral. This plan should offer the measure of security required by both labour and management which is, at the moment, lacking.

d. Adaptation necessary for full employment.

1. Labour.

There are, however, some fundamental changes required, particularly in the attitude of labour, before any plan for full employment can succeed. In the first place, trade unions must accept their measure of responsibility for cost inflation. While it is quite true that the causes of inflationary price rises are many and varied, rising wage demands must take their full share of the cause. In the absence of all other stimui, it is doubtful whether isolated

wage claims themselves would be sufficient to cause rising prices. Especially would this be true if claims are confined to basic industries or to a minority of wage-earners; however, when wage rises extend to all industries, in the absence of deflationary influences (such as falling costs of imports) rising prices will no doubt result. The spiral which would bring this about would be quickly convergent unless passive incomes become more active.

One can hardly expect pure altruism on the part of any labour organization; however, recognition of the fact that passivity of labour's income can greatly assist in the convergence of a spiral resulting from rising imports costs is essential. Considering all the welfare benefits and redistribution of income that labour has gained since the war, it is difficult to see why trade unions should not accept their share of the hardships imposed by unavoidable inflationary stimuli. Doubtless, this negative attitude springs from an unfortunate past; if so, it should be abandoned. Once this exploitation psychology is eliminated, progress can be made toward a stable full employment.

In the second place, the many autonomous trade unions must be prepared to surrender some of their independence to a centralized agency such as the Trades Union Congress. This too will be difficult since these organizations are firmly rooted in past tradition. Since there are as many wage claims as there are unions, powerful internal tensions (see above, Chapter 6) develop which result in differential wage gains within one industry. Hence, the employer is faced not with one wage bill, but with several, some of which may rise so as to protect the traditional margin between skills. Frequently, these margins are quite unnecessary and only serve to defend a pre-war tradition. As a consequence of these tensions, "full employment" may constitute,

as Meade suggests, 10% unemployment. Again, however, it is poor consolation to a worker who entered a particular trade when young because of the higher wage paid to find that his standard of living is no better than others whose work is less skilled. The rapid pace of technology is the real reason for his lowered status since his skill is displaced by unskilled labour and machinery. He is, unfortunately, part of the price paid for progress.

At any rate, these archaic differentials between autonomous trade unions must be abandoned if complete full employment is to be attained. The most efficient method would be the inclusion of craft unions into the industry-wide union so that wage claims could be made once for all. The employer could then consider his wage costs as part of his overhead and plan his production process accordingly, reasonably secure that his wage bill was fixed for a certain period of time. The industrial union could decide on the structure of its wage rates before submitting its claims not only to the employer but also to the representatives at the annual economic conference for review; in this way the plan for full employment could include a suggested national wage structure which would allow for movement of labour into occupations where it is most scarce.

This is not to propose a centralized wage policy such as is practiced in Holland and in Scandinavia. There are advantages in such a system, especially if past history and tradition support it. In Great Britain, however, centralized control of wages would probably not succeed under the circumstances, since labour considers as fundamental its own right to negotiate its wage bargain within the framework of local conditions. As a result, the wage policy which would result from the economic conference would be purely advisory and would depend on moral persuasion for its enforcement.

How would productivity influence a national wages policy ? If labour is sufficiently mobile, wage increases corresponding to productivity increases should attract labour to those industries of highest productivity. The working of a free labour market would accomplish this to the benefit of the nation as a whole. However, there is no evidence that labour is at all willing to permit wages to be determined on this basis. It is futile to argue that labour will move in accordance with the free market forces when these forces are themselves rendered ineffective by the collective bargaining of trade unions. The fact that the employer is in a position to concede wage claims to union representatives because of increased productivity by no means assures that he will. Other pressures, (competition, etc. as discussed in Chapter 8) may be strong enough to overcome the favourable influence of higher productivity. Furthermore, labour itself refuses to recognize the productivity argument except when it operates in labour's favour. The current situation shows wages determined not by individual industries and their ability to pay but by cost of living, other wage rates etc. which influence trade union action. There is, therefore, no case for arguing that labour will move to more efficient industries, lured by the prospect of higher wages. Productivity could only be used as a basis for wage increases if it is sufficiently general to allow a national wage increase. Again this would be part of the plan for full employment.

Lastly, as has already been emphasized, wage agreements should be negotiated for as long a period as possible. Presumably, one year would be the average period for agreements with as many occurring simultaneously as possible. It would be possible then to have a general wage and price increase at a particular time which would

make control easier. As labour begins to accept this "discipline", the advisory capacity of the economic commission would assume more importance.

2. Management

Management's role in the plan for full employment would be just as important as labour's. Since the pressure of competition is felt by management, as contrasted with labour which negotiates for as high a wage as possible, the employers would have much to gain from this plan. Employers' representatives could suggest the maximum wage they are prepared to pay coincident with the state of their business. Most important, this must not include overtime and incentive payments which fail to increase production in sufficient measure to justify the outlay. With the statistical material available, it should not be difficult to determine the approximate level of earnings which are most productive and above which consumer demand increases at a greater rate than production.

Again, businessmen must direct their activities so as to promote the good of the nation rather than their own particular welfare. Emphasis must be laid on the increased output per man-hour rather than on the short-sighted policy of exploiting a high level of consumer demand. It may be necessary to recognise certain areas of employment which properly belong to other industries so as to avoid continuous "poaching" of labour. This is, curiously, a negation of the principle of the free market movement of labour to its most productive uses, for only during full employment (whatever that level may be) will this be of any value. Over-full employment involves the attraction of labour at the expense of other industries and does not necessarily increase total production. During over-

full employment demand for a particular product loses its effectiveness as a market force, since all demand is high and it becomes impossible to tell where demand is greatest. Profitability of an industry and its ability to "poach" does not mean that demand is greater for that industry's product than for any other.

Some other means must be sought, therefore, for the allocation of scarce labour resources to industry than the ability to pay incentive payments. This would be part of the plan for full employment and would be considered along with the most appropriate division of scarce capital goods. Major investment projects (determined by their valuation) could be submitted for approval to the economic planning commission which could advise postponement, if necessary, depending on the resources available to industries producing investment goods. Likewise, the general state of the economy will be an important consideration.

Of course, it is hardly necessary to suggest that the achievement of increased exports rests largely on the shoulders of industry. With domestic demand at such a high level, it is obviously less expensive for industry to supply home demand than to cultivate foreign markets. This is not particularly true of heavy industry which produces for both markets. Again this would be decided by the planning commission so that products could be available for both markets.

Since the greatest weight of the responsibility for production rests on the shoulders of entrepreneurs, an economic plan should be welcomed by them. The security offered by co-ordination of investment and allocation of scarce labour resources should relieve some of the pressures of management which make the risk involved in production so great. In this way, prices might be lower as profits

of security assumed less importance. Further, profits of innovations would have a greater opportunity for development as more efficient techniques of production could be applied with less risk.

3. Government

The part played by the government in planning for full employment would be most important of all. Public expenditure could be geared to the requirements of the nation and the ability to produce. Once private investment is known in advance, public authorities could plan their own investment programmes accordingly. In addition, appropriate government advisors would be in a position to make recommendations to private interests and, if public support was gained, considerable pressure could be brought to bear on any party which refused to agree. Trade unions, for example, could use this as a powerful weapon against an erring employer; on the other hand, should repeated work stoppages occur to gain advantages for a particular trade union at the expense of other incomes as well as the economic well-being of the nation, public opinion could be strong enough to coerce the offender. Especially would this be true if food prices were guaranteed at a certain level in accordance with a full employment plan.

Taxation policy must also be considered in the light of incomes of workers and businesses. The indirect tax for instance, could be levied on consumer goods with a low elasticity of demand if incomes were reasonably stable for a period. When the time comes for another review of the economic situation, the tax might be raised or lowered depending on the tendencies of incomes to rise or fall. Direct taxation could also be adjusted to suit the needs of the economy.

If such a plan for full employment is successful, there would be no place for monetary policy as a control of investment. It would no longer be necessary to restrict investment by making it unnecessarily expensive. The supply of investment goods in relation to demand would be the determinants of investment instead of the supply of credit. In the event of failure to comply with the plan, monetary policy could be used, although it is hoped that it would be unnecessary.

As long as investment resources are limited in supply (in relation to demand) this method of planning implies a method of rationing by priority. This is essential until such time as the capacity of investment goods industries is sufficient to satisfy the demands (both foreign and domestic) made upon them at the full employment level. Public investment should be designed to stabilize this level of demand as fluctuations in private investment appear as a result of the accelerator. At this point, no system of priority would be required since the productive capacity is equal to the demand. Should this plan be followed, no unemployment need occur, but should over-full employment re-appear the "rationing" system would have to be re-imposed since it would be impractical to expand capital goods industries further. Over the long term these industries must gradually increase their capacity, of course, as fixed capital becomes more essential to production. However, since, as is generally agreed, investment goods industries are largely responsible for the inherent cyclical tendencies, these industries must not expand beyond the level required by full employment or contract below this level. Again, it should be noted that rising interest rates would be unnecessary unless industries refuse to comply with the plan as set forth by the economic conference.

Many practical difficulties will have to be surmounted in the application of this plan which can only be discussed in the most general terms. However, it is interesting that duringthe last war-time emergency, western nations submitted to the discipline of complete mobilization of all resources in order to produce to the maximum. At such a time, the supply-demand price mechanism is considered ineffective for the purpose. Granted that this is a short-term emergency requiring the movement of resources into munitions,etc., could not similar considerations apply to full employment ? One is quite justified in wondering why the market mechanism is so efficient at one time and inefficient at another. War-time control of resources were designed primarily to avoid inflation, and since a similar problem exists in peace-time, there is no reason why similar action should not be taken.

Most important, however, is the fact that a full employment policy must include all sectors of the economy. It would be futile to attempt to control wages and not profits and investment and not personal consumption. A wages policy alone cannot succeed without all the other components of an economic policy of which wages are only a part. In such a policy, trade unions will bear their share of responsibility along with the employers' federations and the government.

In the final analysis, the wages-prices spiral is both a symptom and a cause of inflation. In this sense, it cannot be isolated and dealt with by any method of control to the exclusion of other inflationary forces. As labour discovers the fact that it can increase its share of distribution and proceeds to do so, it becomes the cause of price rises. However, if labour is only defending its share of distribution, it is a symptom of other inflationary pressures.

It is quite impossible to distinguish between cause and effect, and, indeed, it is unnecessary to make the attempt, for the spiral itself either causes or results from over-full employment. This is not to suggest, however, that labour's responsibility is not great. Indeed, the adjustment of labour to the relatively new conditions of full employment probably will be the most difficult. But, assuming that trade unionists are reasonable men, it should be accomplished. It must involve a re-orientation of thinking and the abandonment of old traditions and animosities to bring about a sense of national responsibility and to recognize that the welfare of the nation and the welfare of labour are one and the same.

Once the full employment plan is accepted and prices become stabilized, voluntary saving can be encouraged and the economic system can remain more nearly on a full employment basis. The external shocks of rising imports costs can be absorbed without a noticeable effect on the domestic price level. Buffer stocks and subsidies where necessary will remove a great deal of the effects of these shocks and make adjustments easier by spreading them over a longer period. Perhaps, indeed, it may be possible to eliminate the indirect tax on consumer goods, something which should be welcomed by all sectors of the economy.

Ultimately, the solution to all inflation, including the wage-price spiral, is increased production. Any measures designed to increase the effectiveness of labour should be encouraged. For this reason, the maximum employment of resources is beneficial so long as they are efficiently utilized. Full employment, therefore, should approach as near to completely full employment as is possible.

However, when demand rises to such a level that employers find it profitable to increase wage payments without corresponding increases in production, shortages of labour and bottlenecks in the supply of material appear. Production becomes a decreasing function of wages so that consuming potential rises at a greater rate than production. The point of full employment is thus passed and symptoms of inflationary over-full employment appear. Obviously this point of full employment should be as close to 100% employment, allowing for frictional unemployment and "unemployables", as possible. If this"100% employment" is accompanied by maximum production and employers do not further increase wage payments, stable prices will be coincident with the greatest prosperity the nation is capable of securing. Only in this way can the highest degree of security be achieved for both labour and management.

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