Chapter VII Private consumption

The preceding chapters have provided estimates of total resources available, as measured by GDP at factor cost, and of resources required for foreign trade, public expenditure on goods and services, private investment, and stockbuilding. This chapter starts by estimating the level of private consumption required to balance aggregate demand with the assumed level of GDP, both in the par economy for the period 1962-75, and under the assumptions of our hypothetical projections for 1972-5. In the later part of the chapter we estimate the levels of consumption which would be generated by the flow of incomes, given various assumptions about the real burden of taxation. The difference between these latter estimates and the earlier estimates of required consumption may be regarded as a demand gap which would need to be closed by fiscal action if the level of aggregate demand were to be regulated so as to achieve the assumed level of GDP.

Conclusions

2. Table VII-1 below summarizes the changing composition of expenditure in the past and into the future under our various assumptions. From 1961 to 1969 private consumption declined in relation to GDP from 74.0% to 71.5%, mainly because of the relative increase in resources devoted to investment and the balance of payments. By 1971 the ratio of private consumption to GDP appears to have recovered to 73.8%; but this largely reflects a substantial increase in the estimated factor cost adjustment (see paragraph 12).

3. In the par economy private consumption in 1971 shows a slightly higher ratio to GDP than the actual figure, but the ratio is required to decline to 73% by 1975 because of the increasing share of resources devoted to investment and the balance of trade. Under the hypothetical projections assuming 4.5% per year growth of GDP consumption is required to rise as a share of GDP by 1973 because of the deterioration of the trade balance; without devaluation very fast growth of consumption would be required to maintain the 4.5% per year growth rate up to 1975; but given the devaluation end-1973 assumed under projection II, private consumption would

need to fall back to 72.4% of GDP. Details of the estimates of private consumption are given in Appendix Table 9 and the composition of expenditure on GDP is shown in detail in Appendix Tables 10 - 12.

Table VII-1 The composition of expenditure on GDP
(expenditures as per cent of GDP at factor cost, 1963 prices)

	Private consumption	Public expenditure	Private investment	Stock building	Balance of trade[1]	Adjustment to factor cost	Residual error[2]
Actual							
1961	74.0	27.1	11.3	1.3	-0.6	-13.1	-0.1
1965	72.9	27.5	11.6	1.3	-0.8	12.8	0.3
1969	71.5	27.6	12.0	1.1	0.7	-13.3	0.5
1971	73.8	27.7	12.0	0.0	0.4	-14.4	0.5
Par							
1971	74.2	26.9	12.1	1.1	-0.4	-13.9	...
1975	73.0	26.5	13.4	1.0	0.4	-14.3	...
Projection I[3]							
1975	78.1	25.8	13.4	1.5	-4.5	-14.9	0.5
Projection II[3]							
1975	72.4	25.8	13.4	1.5	0.5	-14.1	0.5

(1) Exports less imports of goods and services

(2) Discrepancy between expenditure and compromise estimates of GDP (see paragraph 10)

(3) Hypothetical projections assuming 4.5% per year growth of actual GDP, 1971-5, and either (I) no devaluation or (II) devaluation at end-1973.

4. The calculations of private consumption which would be generated by the flow of incomes described in the later part of the chapter assume the real burden of taxation on the personal sector expected, under present policies, for 1972 (see paragraphs 15-16 below). Table VII-2 below shows the 'tax gaps' implied, under this initial assumption, for the par economy and for our hypothetical projections to 1975.

Table VII-2 The real burden of taxation, 1971-5

	Required (1) consumption	Generated (2) consumption	Initial (3) tax gap	Terms of (4) trade	Rents and food	Final tax gap
	- £ million, 1963 prices -		- £ million, 1971 prices -			
Par						
1971	24744	24491	-395	-516	0	-911
1973	26206	26098	-168	-468	-225	-861
1975	27531	27728	+307	-1103	-450	-1246
Projection II (5)						
1971	24136	24055	-126	-66	0	-192
1973	26625	26229	-618	+41	-225	-802
1975	28229	28385	+243	-1339	-450	-1546

(1) Private consumption required to achieve the assumed level of GDP. For comparability with projection II (including the actual figure for 1971), a residual error has been introduced into the par estimate, bearing the same ratio to GDP in each year as that assumed in projection II

(2) Private consumption generated by the flow of incomes, assuming the current real burden of taxation and the ratio of import prices to home costs expected for 1972

(3) Difference between the above estimates, expressed at 1971 prices, and divided by the ratio of consumption to personal income to show the required change in taxation of personal income compared with the assumptions of (2) above

(4) The effects on consumption of changes in import prices relative to home costs, expressed in terms of personal income at 1971 prices, as for (3) above

(5) Assumes 4.5% per year growth of GDp and devaluation at end-1973

5. The initial tax gap shown in the table makes no allowance for the effects on real personal incomes of changes in import prices relative to home costs, and is based on the expected prices of 1972 On this basis consumption generated in the par economy is too low in 1971, but rises above the required level by 1975. Since the terms of trade assumed for the par economy are lower than those expected in 1972, import prices are expected to be higher in relation to home costs, therefore introducing a deflationary effect on real personal income which rises

from about £500 million (at 1971 prices) in 1971-3 to over £1,000 million in 1975 as the par terms of trade are required to deteriorate further in order to achieve the target balance of trade. When we allow also for higher food prices (due to the movement to the Common Agricultural Policy) and for higher rents to be charged for local authority housing, the total deflationary gap which would need to be made up by a lower real burden of taxation (as compared with our initial assumption) of £900 - £1250 million (at 1971 prices) throughout the period. But from the point of view of the personal sector the initial tax gap is most relevant; this shows an increasing required deflation of real incomes from 1971 to 1975. Whether this was the result of higher import prices or more stringent fiscal policy would be a secondary matter.

6. Under projection II, the initial tax gap becomes increasingly negative to 1973 as reductions in the burden of taxation are required to offset the leakage of demand in the deteriorating trade balance, in order to maintain the assumed 4.5% per year growth of GDP After the devaluation at the end of 1973 more demand is generated by the turnround on the balance of trade and a positive 'tax gap' appears But our estimates suggest that the effect on real personal income of the rise in import prices following on the devaluation required to force down the terms of trade would be strongly deflationary. Some fiscal compensation for the terms of trade effect would be required to sustain the postulated growth of demand at 4.5% per year.

7. It should be emphasised that these calculations do not relate to the taxation of the personal sector in money terms. An increase or reduction in real taxation is defined in our analysis simply as a change in the ratio of net taxation (including indirect taxes and current grants) of the personal sector to gross personal income. An increase of taxation in this sense is generally expected as real or money incomes rise because of the 'fiscal drag' inherent in a progressive tax system (see paragraph 19 below) without any changes in fiscal policy defined in terms of money tax rates.

8 Our calculations also abstract from various short-term effects which may influence the level of consumption such as changes in the personal savings ratio and time-lags in the adjustment of prices when the pace of inflation accelerates or slackens. The purpose of the calculations is to estimate the pressure on real personal income resulting, on average, either from fiscal policy or from changes in the terms of trade, in the par situation or under the assumptions of the hypothetical projections.

The required level of consumers' expenditure

9. The following paragraphs describe estimates of the level of consumers' expenditure required to equate total expenditure with the assumed level of G.D.P., both in the par economy and under the two hypothetical projections. All other categories of expenditure have already been estimated in previous chapters, measured at market prices. These expenditures are adjusted to a factor cost basis and subtracted from the assumed level of G.D.P. to obtain consumers' expenditure at factor cost. This latter is then adjusted to a market price basis. The analysis of the following paragraphs shows that the adjustment to factor cost, at 1963 prices, presents surprisingly difficul problems because, for past actual data, the only figure published in the national income accounts is the adjustment in aggregate.

10. Before describing the calculation of adjustments to factor cost the treatment of the residual error must be described. We have measured G.D.P. by the compromise index linked to the expenditure estimate for 1963 and this means that we have generated a discrepancy in other years between our estimat of G.D.P. and that derived from expenditure data alone. In the last few years the residual error has continuously been substantially positive, at about 0.5% of the level of G.D.P., the expenditure estimate of G.D.P. having fallen behind the output estimate. We have not introduced any residual into our par estimates because there is no strong presumption about the likely magnitude and sign of the residual error under the assumptions which define the par economy. But for our hypothetical projections to 1975, starting at the actual position in 1971, we have retained a residual error which bears the same ratio to G.D.P. in each year as the average residual error in 1969-71. This procedure avoids any discontinuity in the hypotheti projections.

11. In estimating adjustments to factor cost we have assumed that the tota adjustment can be decomposed into net indirect taxes falling respectively on consumers' expenditure, public current expenditure, gross fixed capital

formation and exports (by convention imports are always shown exclusive of U.K. indirect taxes). Estimates of the actual adjustment, divided into the above categories, are available for 1963. For expenditures other than private consumption we assume that the ratio of factor cost adjustment at 1963 rates to expenditure at 1963 prices is constant; the ratios used are 2.99% for public current expenditure, 5.37% for fixed investment, and 2.65% for exports of goods and services. These are estimated actual ratios in 1963.

12. For past actual series, 1960-71, it is possible to estimate the factor cost adjustment for private consumption as a residual, since the total adjustment at 1963 rates is published for each year. The implied ratio of adjustment to consumers' expenditure shows a rising trend through the period and abnormally high values in one or two years, particularly 1964 and 1971. We have not been able to find any satisfactory explanation for the high values in these two years, and therefore assume that in the future, 1972-5, the adjustment will return to its rising trend path. If we had assumed a continued faster increase in the ratio above the past trend rate starting at the high value estimated for 1971, the adjustment could be higher by nearly 1% of G.D.P. in 1972 and very much higher by 1975. Given the trend decline of the share in consumers' expenditure of tobacco and alcohol, which in 1963 were the most highly-taxed items, we do not believe that it would be reasonable to project such high values for the future period.

13. Consumers' expenditure at factor cost is obtained by subtracting all other items, measured at factor cost, from G.D.P. The assumed ratio of factor cost adjustment to expenditure is then used to convert this estimate to market prices and to obtain the total factor cost adjustment. The results of these calculations are given in Appendix table 9.

<u>The real burden of taxation; concepts and method</u>

14. Fiscal policy impinges on the personal sector's real income not only through direct taxation but also through current transfers from the public sector, indirect taxes (including local authority rates) and even through

subsidies to public corporations which affect the prices charged by the latter to consumers. The real income of the personal sector also varies, in relation to G.D.P., because of changes in the undistributed income of the company sector, and in the ratio of import prices to home costs (which affects the cost of goods and services at market prices in relation to G.D.P. at factor cost).

15. The concept of neutral, or unchanged, fiscal policy can be defined in various ways. For our purpose what is relevant to policy decisions is the real burden of net taxation on the personal sector. We therefore define an unchanged fiscal policy as being one which does not alter the ratio of real personal disposable income to G.D.P. (apart from any indirect effects via the pressure of demand on the distribution of income between wages and salaries and other factor incomes).

16. In this exercise we assume initially a fiscal policy which imposes the same real burden of taxation as that expected, on current policies as regards tax rates, for 1972. An estimate of the ratio of consumers' expenditure to G.D.P. which can be expected on current policies is given in the November forecast by the National Institute[1]. The initial assumption is that net taxation bears this same constant ratio to personal income in each year and that import prices bear the same relation to home costs as expected for 1972.

17. We have made two adjustments to the consumption share forecast by the National Institute in order to obtain the ratio of consumers' expenditure to G.D.P. in the par economy on the initial assumption about fiscal policy and import prices. Firstly, the savings ratio of the personal sector in the par economy is assumed to be 8.2% of disposable income, which is an average of estimated actual savings ratios over recent years. Secondly, we assume that at the par pressure of demand personal sector income would form

(1) National Institute Economic Review, November 1971.

a slightly lower share of G.D.P. than is expected for 1972 (with G.D.P. still below par), because of the higher profit incomes expected at the par pressure of demand.

18. The initial estimate of the level of consumers' expenditure which would be generated in the par economy, given a constant real burden of taxation as defined above (paragraphs 15-16), can be modified in the light of various announced or assumed policy measures. In the par economy we assume that the terms of trade will be shifted down over the period 1971-5 in order to achieve the required target balance of trade. Apart from changes in import prices expected under our various projections of the terms of trade, the level of consumer prices is expected to rise relative to domestic incomes because of two long-term policies of the Government. These are the increase in rents for local authority housing, and the higher level of food prices which will result from the imposition of levies and adoption of the Common Agricultural Policy.

19. Apart from these two increases in effective taxation, there is a general presumption that a higher share of personal income will be absorbed in taxation as the level of real income rises, on account of the progressive element in the tax system. This 'real fiscal drag' does not necessarily raise the real burden of taxation as it appears to any individual taxpayer, and should certainly be distinguished from the effects of money inflation (which increase the ratio of net taxation to income without any increase in real income), and from increases in the tax rates themselves. We shall give some estimates of the 'real fiscal drag' on a rather arbitrary assumption about its quantitative magnitude as an indication of the increased tax burden which may, to some extent, represent the expectations of taxpayers.

20. The assumptions explained above provide us with a number of different estimates of the level of consumers' expenditure which would be generated in the par economy; similar estimates can be obtained for the hypothetical projections to 1975. Each of the estimates has a different interpretation in terms of fiscal policy but none of them are intended to represent the effect of maintaining unchanged tax rates (in money terms). The estimates are designed to show the effects on real personal income of the requirements of demand management and of the need to achieve a reasonable balance of trade.

Consumption in the par economy, 1971-5

21. The first step in the analysis of levels of consumption generated by the flow of incomes is to adjust the forecast of the ratio of consumers' expenditure to GDP, at 1963 prices, for 1972 calculated by the National Institute assuming no change in current fiscal policy (defined in terms of money rates). We assume that in the par economy the personal savings ratio would be 8 2% (an average of recent past values) rather than the 7 9% forecast by the National Institute. This requires an adjustment of 0 26% to the ratio of private consumption to GDP. We also assume that the ratio of consumption to GDP would be lower by 0.2% for every 1% increase in the pressure of demand as measured by the ratio of actual GDP to par GDP, because of the improvement in the share of company profit incomes. After making these two adjustments the ratio of consumers' expenditure to GDP in 1972 would be 73.1% Holding this ratio constant we obtain initial estimates of consumption for each year 1971-5 in the par economy, before allowing for the effects of changes in the ratio of import prices to home costs or in the real burden of taxation.

The effect of the terms of trade

22. We also need to take into account the effect on real personal income of the terms of trade and import prices. We assume that in the absence of devaluation, import prices will tend to decline slightly relative to home unit costs, and that any changes in the terms of trade result from movements of import prices rather than export prices, relative to home costs. Movements of import prices relative to home costs are assumed to reduce real private consumption by 1% for each 4% increase in the ratio of import prices to home costs.

23. Differences between the assumed terms of trade in the par economy and the actual or expected actual terms of trade are assumed to result from exchange-rate changes. Recent experience suggests that devaluation causes a substantial shift in export prices relative to home costs, as would be expected in the case of

exporters selling in rather oligopolistic markets who would invite retaliation if they cut their foreign prices to the full extent of the devaluation. Because exports have a particularly high import content, export prices tend in any case to be pushed up relative to home costs by the rise in import prices after devaluation We therefore assume that a forced shift in the terms of trade would be achieved only with a substantial change in export prices relative to home costs and therefore that the change in import prices will substantially exceed the shift in the terms of trade itself Our calculations are based on a 4% increase in import prices for every 1% forced deterioration in the terms of trade.

24. Since the terms of trade are required to deteriorate between 1971 and 1975 in the par economy in order to achieve a rising trade target under rather adverse conditions (see Chapter IV) a substantial increase in the deflationary effect of import prices, equal to £376 million at 1963 prices, on consumers' expenditure is estimated for 1975 as compared with 1971

The effects of higher food prices and rents

25 It is well-known that estimates of the increase in food prices which will follow from the introduction of the Common Agricultural Policy are very uncertain because they depend on assumptions about the relationship between world prices and EEC support prices. The recent exchange-rate changes have made the situation even less clear, and we have had to make rough guesses at the probable magnitudes. Estimates of the increased rents to be charged by public authorities are taken from the White Paper. These two effects are distinguished separately from fiscal policy in general because they are specific measures which may have a substantial impact on real personal income to which the Government has a long-term commitment.

Fiscal drag

26. The indirect tax system and current grants to the personal sector, net of insurance contributions, are assumed not to exert any significant drag on the growth of real incomes provided that the normal expectation that benefits will rise in real terms at the same pace as real incomes as a whole is in fact realized.

The real fiscal drag inherent in the income and surtax system, defined as the effect of the difference between marginal and average tax rates on the growth of consumers' expenditure is estimated to be 15%. This ratio is applied to the difference between consumers' expenditure projected in any given year and that assumed for 1971 to indicate the loss of consumption which might be expected on account of the progressive nature of this part of the tax system.

Tax gaps in the par economy, 1971-5

27. The levels of consumers' expenditure which would be generated in the par economy under the various assumptions discussed above are shown in detail in Appendix Table 13. The difference between the estimates of generated consumption and the level of consumption required to balance total demand with GDP (estimated in the first part of this Chapter) indicates the size of the implied tax gap. We express the tax gap in terms of the value of the change in net taxation of personal income required, measured at 1971 prices. This is obtained by dividing the 'consumption gap' at 1963 prices by the ratio of consumption to disposable income, and then adjusting to 1971 prices. The tax gap implied in our initial estimate of generated consumption, before allowing for the effects of the terms of trade, fiscal drag, etc. is quite large and negative for 1971 in the par economy, implying that the par pressure of demand could only have been achieved with a lower level of net taxation. By 1975 the initial tax gap becomes positive, but is much smaller than the deflationary effect expected from the rise in import prices by that year.

Tax gaps under the hypothetical projections, 1971-5

28. The analysis described above for the par economy can also be applied to our two hypothetical projections which assume 4.5% per year growth of GDP to 1975. Adjustments have to be made for differences in the assumed pressure of demand (see paragraph 21 above) and in the assumed terms of trade (see paragraphs 22-23). The results of these calculations, also displayed in Appendix Table 13,

show that large reductions in real taxation would have to be made in order to sustain 4 5% per year growth of GDP to 1975 without devaluation. The devaluation at end-1973 assumed under the second projection does not require deflationary fiscal action because under our assumptions the required reduction in customers' expenditure relative to GDP is achieved by the rise in import prices.