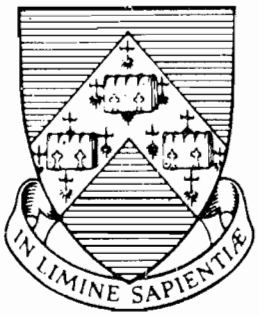

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Budget Strategies for Alcohol and Tobacco Tax in 1987 and Beyond

by
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DISCUSSION PAPER 22

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Abstract

Pre-budget months of recent years have seen the opposing factions of industrial and public health lobbies jostling for influence over the Chancellor's alcohol and tobacco tax policy. Industry petitions for lower tax rates, citing factory closures and redundancy figures as evidence of the consequences of past budget decisions. The public health lobby demand increased taxation, citing rising trends in indicators of alcohol and tobacco related harm as evidence for a public health approach. In the 1986 Budget there was a large increase in cigarette tax but no increase in the excise tax levels on alcoholic drinks. Will this strategy be repeated in 1987?

Recent trends in the alcohol and tobacco markets, examined in this paper, indicate that industrial factors are likely to outweigh health factors in March. Consumption of beer has fallen and exports of spirits continue to decline. Although the tobacco industry has faced declining home consumption for more than ten years, exports have helped to sustain production levels. In 1986, however, exports of manufactured cigarettes began to decline with imports still at a high level. Employment has contracted in both industries. Consumption of tobacco has declined every year since 1979. Alcohol consumption has also fallen since the historical peak of 1979, but has shown a resurgence since 1983.

Preventing health problems and protecting industry

are just two of the objectives that the Chancellor could explicitly or implicitly seek to satisfy in the Budget. Reductions in income tax, however, are expected to form the hub of the 1987 Budget. To achieve this objective the Chancellor must maintain revenue from other sources. Decisions on the levels of alcohol and tobacco tax may well depend on the buoyancy of other revenue sources. Public opinion may also be important if the 1987 Budget is the last before a General Election. Whereas prevention of health problems has been generally accepted as a reason for increasing tobacco tax, raising alcohol tax remains unpopular. The state of the alcohol and tobacco markets amonst other factors, suggests that the Chancellor may repeat the 1986 strategy. This implies no increase in alcohol tax and some increase in cigarette tax, although possibly less than in 1986.

An incoming government could re-examine its budget strategy on alcohol and tobacco taxation. The main alternative to the revenue and trade based policy of recent governments would be a prevention strategy. The theoretical arguments outlined briefly in this paper, suggest revenue and prevention objectives need not conflict. However, there are practical and methodological problems involved in implementing both policies which will lead to conflict in reality. Governments must therefore develop more generalised rules to achieve less specific objectives. Two operational rules for generalised prevention policy are examined and illustrated with reference to the 1987 Budget.

INTRODUCTION

The 1987 Budget will probably be the last before the next General Election. It is therefore an appropriate time to consider how the aims of Government alcohol and tobacco tax policy will be reflected in the Budget changes in March, and what alternatives are available to an incoming government. This paper attempts to identify the stated and implicit objectives of existing budget policy on alcohol and tobacco and the consequences for the March Budget. It also considers the potential for a switch towards prevention policy in the light of a series of reports recommending tax policy to reduce consumption and associated harm. [See Royal College of Psychiatrists (1979) and (1986), Royal College of Physicians (1983) and Central Policy Review Staff (1979).]

Some objectives for budget policy on alcohol and tobacco have been clearly stated by government, but many are implicit and must be inferred from government actions. The influences, objectives and constraints on the tax policy of recent governments are analysed in the first section by considering market trends and budget statements. These factors are used to identify the likely tax policy for the 1987 Budget.

The main alternative to the revenue and trade based budget policy of recent governments is a prevention strategy. The economic principles underlying prevention strategies are outlined in the second section. Two alternative policy objectives can be identified and the practical problems of implementating these policies are discussed in the final section. Excise changes in the 1987 budget are used to illustrate the impact of a switch to prevention objectives.

Table 1. Excise Duty on Alcohol and Cigarettes (at current prices)

	SPIRITS		BEER			WINE				CIGARETTES	
Date	Duty per litre of alcohol	Estimated price effect of duty change on bottle of whisky	Duty per hecto-litre at 10.30°	Per added degree	Estimated price effect of duty change on pint of beer	Duty per hectolitre (£)			Estimated price effect of duty change on bottle of table wine	Duty per 10000 cigarettes	Estimated price effect of duty change on packet of 20
						< 15°	15°-18°	18°-22°			
	£	p	£	£	p				p	£	p
Previous level	10.44	-	10.65	0.355	-	71.49	82.48	97.11	-	11.77	6
March 1980	11.87	50	13.05	0.435	2	81.42	93.93	110.59	8	13.42	5
March 1981	13.60	60	18.00	0.600	4	95.20	112.90	114.70	12	18.04	14
										19.03*	3*
March 1982	14.47	30	20.40	0.680	2	106.80	137.90	162.30	10	20.68	5
March 1983	15.19	25	21.60	0.720	1	113.00	145.90	171.70	5	21.67	3
March 1984	15.48	10	24.00	0.800	2	90.50	157.50	183.30	-18	24.97	10
March 1985	15.77	10	25.80	0.860	1	98.00	169.0	194.9	10	26.95	6
March 1986	15.77	0	95.80	0.860	0	98.00	169.0	194.9	0	30.61	11

Notes:

Spirits, beer, wine and cigarettes are also subject to VAT and cigarettes to an additional ad valorem component set at 21% during this period.

Source:

Compiled from various tables in Report of the Commissioner of HM Customs and Excise, year ending 1984 March, and Chancellor's Budget Statements.

* Extra duty applied on 8.7.81.

1. ALCOHOL AND TOBACCO TAX POLICY SINCE 1979

1.1. Stated Objectives

Alcohol and tobacco taxation consists of an ad valorem component as a percentage of final price, and a specific component as a fixed sum per quantity. Both goods are subject to the broad based ad valorem Value Added Tax (V.A.T.) which has been set at 15 per cent since 1979. Cigarettes, however, carry an additional ad valorem element of 21 per cent. Excise tax on alcohol and tobacco is the specific element set in fixed monetary terms for a given characteristic. For example, excise is set per 1000 cigarettes on tobacco, and on alcohol content for spirits. However, excise on wine is set according to wide bands of strength and on non-cigarette tobacco products by weight. Excise rates on alcohol and cigarettes since 1980 are presented in Table 1.

The weight of an ad valorem tax to price remains constant despite price changes. In periods of inflation, however, the real value of specific elements declines unless the level is periodically adjusted by the rate of inflation of general prices. Part of the present Government's medium term financial plan included a statement that excise rates should be revalorised. The Government has not succeeded in achieving this objective. Figures in Table 2 show that changes in excise rates have not kept pace with inflation. Other objectives appear to have superceded revalorisation policy.

Chancellors have identified some of the alternative objectives affecting the deviation from revalorisation policy. In 1984 and 1986, the health consequences of smoking were cited as the reason for increasing cigarette tax by more than the rate

Table 2. Changes in Duty Composed to Changes in the All Item Retail Price Index

Date	Percentage change in RPI for all items to March	Percentage change in duty on Beer (1)	Percentage change in the duty on Spirits	Percentage change in the duty on Wine(2)	Percentage change in the duty on cigarettes
1980	19.8	22.5	13.7	13.9	12.3
1981	12.6	37.9	14.6	14.6	37.4
1982	10.4	13.3	6.4	6.4	8.3
1983	4.6	5.9	5.0	5.0	5.4
1984	5.2	11.1	1.9	1.9	14.4
1985	6.1	7.5	1.9	1.9	8.1
1986	4.2	0.0	0.0	0.0	13.6

Notes: 1. Beer duty calculated at 1037°

2. Wine duty calculated for wines of less than 15°

Sources: Duty figures as in Table 1, RPI figures from the Department of Employment Gazette

of inflation. A European Court ruling in 1983 was given as the reason for reducing the absolute tax rate on wine in 1984. The ruling implied the U.K. overtaxed wine relative to beer. [Court of Justice (1983)]. Another stated objective is protection of the spirits industry. In 1985 the Chancellor cited the problems of the Scotch Whisky industry to justify a tax increase of less than half the rate of inflation. In 1981, an additional tax was levied on cigarettes to make up for a shortfall in revenue resulting from objections to the increase in derv duty. These examples illustrate the flexibility of excise revenue for responding to multiple macro-economic objectives.

Stated objectives for budget tax policy have not accounted for all the changes in alcohol and tobacco tax since 1979. For example, in 1984 excise on cigarettes was revalorised to the 1965 value with no justification for the choice of base year. No reasons were given in 1986 for the lack of change on alcohol excise. Some of the implicit objectives and unstated influences on budget policy however can be deduced from trends in market data related to alcohol and tobacco.

1.2. Implicit Objectives and Policy Constraints

1.2.1. Revenue

Taxes on alcohol and tobacco are an important source of government revenue. Real tax yields and the relative importance of alcohol and tobacco revenue to total revenue are measured by figures in Table 3. Real yields were higher in 1985 than 1979 despite a fall in the share of alcohol and tobacco in total revenue. The composition of revenue from alcoholic drinks has also changed. In 1979, excise and V.A.T. on beer constituted 43% of

Table 3. Revenue from Alcoholic Drink and Tobacco

Year	Real tax yields* (£m 1980 Prices) Alcohol Tax	Tobacco Tax	Alcohol Tax as % of total tax on expenditure	Tobacco Tax as % of total tax on expenditure	Alcohol Tax as % of total Central Govt current A/C receipts	Tobacco Tax as % of total Central Govt current A/C receipts
1979	3763	3470	14.6	13.5	4.9	4.5
1980	3694	3325	14.1	12.7	4.7	4.2
1981	3853	3484	14.0	12.6	4.7	4.3
1982	3915	3556	13.5	12.3	4.7	4.2
1983	4105	3580	14.1	12.3	4.7	4.1
1984	4146	3670	14.0	12.4	4.7	4.1
1985	4220	3708	13.9	12.2	4.6	4.0

Notes: * Tax yields include excise and VAT receipts

Source: National Income and Expenditure Accounts

alcohol revenue, spirits 41% of revenue, and wine just 16%. By 1985, wine revenue increased to generate 19% of alcohol revenue, beer revenue increased to 50%, but spirits revenue declined to 31%. These changes reflect changes in both consumption patterns and tax policy.

1.2.2. Prices

The mechanism by which tax changes alter prices is of concern to both the industrial and public health lobby because final price affects consumption. Tax as a proportion of prices can vary over time. Figures in Table 4 show that nearly 75% of expenditure on tobacco products is paid as tax but the proportion for alcohol is smaller. However, tax is not the only determinant of price. Prices vary with production costs, profit margins, transport costs and retail margins. Maintaining the real value of excise tax alone is unlikely to ensure the stability of relative prices.

Table 5 presents an index of the real price of alcohol and tobacco. This is constructed by dividing the actual alcohol and tobacco price indices by an index of all prices. It shows alcohol and tobacco prices relative to all other prices. Real prices therefore depend on specific changes in the price of alcohol and tobacco and the general factors which influence the price of all other goods. Between 1979 and 1985 the real price of different alcohol and tobacco goods has fluctuated considerably. In general, except for wines, ciders and perrys, alcohol and tobacco goods have become more expensive relative to other goods.

Short term fluctuations in price are of particular

Table 4. Percentage of Tax in Expenditure on Alcohol and Tobacco

Year	Beer [1]	Wine [1] Cider and Perry	Spirits [1]	Tobacco [1]
	%	%	%	%
1979	30.1	30.7	52.4	69.5
1980	31.6	31.4	51.1	69.0
1981	34.3	32.8	51.1	70.3
1982	35.7	33.5	52.1	73.1
1983	35.7	35.4	49.7	73.3
1984	35.8	32.0	49.7	73.8
1985	35.6	31.6	48.4	74.9

Notes: 1. Figures are derived from the total tax yield of VAT and excise duties and total current expenditure for each commodity.

Source: National Income and Expenditure Accounts.

Table 5. Real Prices or Prices of Alcohol and Tobacco Goods Relative to all other prices (1979=100)

Year	Beer	Spirits	Wines, Cider and Perry	Total Alcohol	Cigarettes	Total Tobacco
1979	100.0	100.0	100.0	100.0	100.0	100.0
1980	105.2	101.3	99.9	103.1	101.0	100.8
1981	112.8	103.3	99.4	107.4	111.9	111.6
1982	116.1	103.5	99.4	109.1	118.9	118.6
1983	120.2	105.1	99.5	111.4	120.8	120.6
1984	123.5	105.5	95.3	111.9	127.9	127.1
1985	128.0	105.1	94.8	113.5	132.6	131.3
3rd Quarter 1986	128.7	n.a.	n.a.	113.9	n.a.	140.3

Notes: Price Indices were calculated from the expenditure series at current and constant prices for each item and divided by the series derived from all consumers expenditure.

Source: National Income and Expenditure Accounts.

concern to industry because they affect market stability. The public health lobby have, however, paid most attention to long run price trends. By constructing a real price index over a longer period, it can be shown that the real price of spirits has fallen by 25% since 1963. The real price of wine, cider and perry has also fallen by 20% over the period. Beer prices show the most substantial change, being 34 per cent more expensive relative to other goods in 1985 compared to 1963. [Godfrey, Hardman and Powell (1986)]. Despite the large tax increases of recent years, the real price of cigarettes only passed the 1965 peak price in 1985.

Consumption of most goods is affected by changes in incomes. For example alcohol consumption tends to rise with income. Changes in purchasing power and prices relative to income levels may influence tax policy. Personal disposable income per capita declined from 1980 to 1982, but has subsequently shown a slight increase. Prices relative to earnings have not changed substantially over the period. This contrasts dramatically with changes over a longer period. For example, in the twenty years since 1964, the amount of work time required to buy a pint of beer fell by 12%, and to buy a bottle of whisky by 63%. [Godfrey and Powell (1985)].

1.2.3. Consumption

Consumption figures are of interest to government for revenue and trade objectives in tax policy as well as to the industrial and public health lobbies. Changes in consumption are presented in terms of constant expenditure and as per capita volume rates in Table 6 and Table 7.

Table 6 Tobacco and Alcohol Expenditure, 1979-1985, in Constant 1980 Prices

Year	BEER		WINE, CIDER AND PERRY		SPIRITS		ALL ALCOHOL		CIGARETTES		ALL TOBACCO	
	Total (£m)	Per capita (£ per person over 15 per year)	Total (£m)	Per capita (£ per person over 15 per year)	Total (£m)	Per capita (£ per person over 15 per year)	Total (£m)	Per capita (£ per person over 15 per year)	Total (£m)	Per capita (£ per person over 15 per year)	Total (£m)	Per capita (£ per person over 15 per year)
1979	5588	126.5	1904	43.1	2890	65.4	10382	235.1	4335	98.2	4960	112.3
1980	5320	119.6	1915	43.0	2720	61.1	9955	223.8	4218	94.8	4281	108.4
1981	5000	111.7	2051	45.8	2561	57.2	9612	214.7	3860	86.2	4471	99.9
1982	4825	107.3	2117	47.1	2428	54.0	9370	208.4	3543	78.8	4128	91.8
1983	4913	108.7	2323	51.4	2494	55.2	9730	215.2	3519	77.8	4082	90.3
1984	4943	108.7	2515	52.3	2525	55.5	9983	219.5	3401	74.8	3943	86.7
1985	4934	107.9	2632	57.6	2658	58.1	10224	223.6	3321	72.6	3837	83.9

		Beer £m	Other Alcohol £m	Total Alcohol £m	Total Tobacco £m
1985	1st, 2nd, 3rd quarter	3667	3326	6993	2867
1986	1st, 2nd, 3rd quarter	3683	3354	7037	2788

Source: National Income and Expenditure Accounts and Monthly Digest of Statistics

Between 1979 and 1985 real per capita expenditure on cigarettes fell by 26%. The number of cigarettes smoked per capita, for smokers and non-smokers, fell by 24%. These changes cannot be completely ascribed to tax policy and its effect on prices. Real personal disposable income declined in the early part of the period and public acceptance of the health effects of smoking became more widespread. Government, however, may have used consumption data as support for the policy of occasional tax hikes on cigarettes.

Year by year changes in cigarette consumption are shown in Table 8. Although consumption has fallen the rate of decline has varied. The effects of the 1986 tax hike are not fully apparent. Recent figures suggest consumption continued to decline in 1986, with tobacco expenditure 2.8% lower in the first 3 quarters of 1986 compared with the same period in 1985. Between January and July 1986 compared with the same period in 1985, the number of cigarettes released for consumption fell by 6%.

Trends in alcohol consumption have been more varied since 1979. Per capita expenditure and pure alcohol consumption declined between 1979 and 1985. Despite the overall trend, consumption of wines, ciders and perrys increased in volume and value terms. The public health lobby has pressed for tax policy to reduce alcohol consumption but it is unlikely that reducing consumption has been an implicit Government policy. Demand for alcoholic drinks, particularly wines and spirits, are elastic with respect to incomes. The impact of the recession between 1980 and 1981 would have been to depress consumption. In addition, levels of

Table 7 Tobacco and Alcohol Consumption by Volume 1979-1985

Year	Beer (Thousand hecto-litres)	Wine (Thousand hecto-litres)	Cider (Thousand hecto-litres)	Spirits (Thousand hecto-litres of alcohol)	Total Alcohol (Hecto-litres of pure alcohol)	Per capita (Litres of pure alcohol per person over 15 years)	Cigarettes (Thousand million)	Per capita (no. per person over 15 per year)	Other tobacco consumption (million kilogram)
1979	68244	4535	2323	1105	4293	9.72	124.5	2819	13.00
1980	65496	4537	2255	996	4125	9.27	122.0	2742	12.60
1981	62316	4879	2408	946	3999	8.93	109.8	2452	12.72
1982	61404	4908	2899	891	3930	8.74	102.3	2275	12.24
1983	62232	5359	3258	917	4055	8.97	102.6	2270	11.76
1984	62076	5890	3259	913	4106	9.03	100.0	2198	11.04
1985(1)	61507	6182	3174	973	4169	9.12	98.3	2150	10.54
January-July 1985(1)	33956	3032	1714	444	2153	n.a.	57.1	n.a.	6.02
January-July 1986(1)	33924	3083	1691	431	2140	n.a.	53.7	n.a.	5.63

Notes: (1) Figures are provisional.

(2) Calculated assuming average alcohol strengths of:- beer at 3.7%; wine less than 15% at 12%; wine more than 15% at 17%; sparkling wine at 12%; made-wine at 13.5%; cider at 4%.

Source: Monthly Digest of Statistics.

consumption in 1979 reached an historical peak with per capita consumption twice as high as in the 1950's.

Consumption of alcohol began to rise in 1983 after the decline from 1979, and the public health lobby continued to pressure government for a tax policy to reduce consumption. Long run consumption figures are usually used by the public health lobby in association with indicators of harm. This is because health indicators reflect past levels of consumption.

1.2.4. Changing Distribution of Alcohol Consumption

Figures in Tables 6 and 7 show a change in the composition of alcohol consumption. Government may monitor distributional changes to identify the need for industrial and trade considerations in tax policy. Although the Government has only declared a policy of protection for the spirits industry, it is likely to take the effects of tax policy on domestic beer producers into account. Also the major U.K. brewers have an important interest in wine distribution.

Total wine consumption increased in every year except 1980. The growth resulted from an 84% increase in consumption of table wine and a 44% increase in the consumption of sparkling wines since 1979. Consumption of wines of 15 per cent or more alcohol by volume declined by 36 per cent over the same period. Rising consumption of cider was another noticeable trend in the alcohol market over the period. After 1983, however, cider consumption stabilised and provisional figures since 1985 suggest a reversal of the upward trend.

Consumption of beer was lower in 1985 than in 1979.

Table 8 Year by Year Changes in Per Capita Consumption

Year	Beer		Wines, Cider and Perry		Spirits		Cigarettes	
	% Change from Previous Year							
	Expenditure	Volume	Expenditure	Volume	Expenditure	Volume	Expenditure	Volume
1980	-5.5	-4.7	-0.2	-1.9	-6.2	-6.6	-3.5	-2.7
1981	-6.6	-5.5	+6.5	+5.4	-5.4	-6.4	-9.1	-10.6
1982	-3.9	-1.9	+2.8	+2.0	-6.4	-5.6	-8.6	-7.2
1983	+1.3	+0.8	+9.1	+8.5	+2.3	+2.2	-1.3	-0.2
1984	0.0	-0.9	+1.8	+6.5	-1.0	+0.5	-3.9	-3.2
1985	-0.7	-1.4	+10.1	+2.2	+6.1	+4.7	-2.9	-2.2

Notes: The volume figures measured in terms of litres e.g. pure alcohol using the conversion figures given in Table 7. All other measures as defined in Tables 6 and 7, per capita referring to persons over 15 years old.

Source: Tables 6, 7. Population figures from the Monthly Digest of statistics.

The actual expenditure in 1985 of £184 per person over 15 was 15 per cent lower in real terms than in 1979. Total consumption of litres of beer was 10 per cent lower in 1985 compared to 1979. The lowest level of consumption since 1979 occurred in 1982, and although there was a recovery in 1983, beer consumption was fairly static over the period. Volume series also provide evidence of a decline in consumption in 1985 and in the first sixth months of 1986 compared to the same period in 1985.

Table 8 indicates the volatility of spirits consumption which underlied a fall in consumption of approximately 6 per cent per year between 1979 and 1982. After a small recovery in 1983, consumption stabilised in 1984 and then increased again in 1985.

1.2.5. Trade and Industry

Changes in consumption and production are monitored by the government departments which sponsor the alcohol and tobacco industries. The M.A.F.F. acts for the alcohol industry and the D.T.I. for the tobacco industry, and both departments may influence budget policy. Export trade is a particularly important element of tobacco and spirits production. For example, despite falling domestic consumption of tobacco after 1973, production increased to 1980 due to an increase in export trade. Excise policy is likely to be influenced by balance of trade considerations as well as domestic production trends.

Trends in imports and exports of alcohol and tobacco are presented in Table 9. The overall balance of exports to imports was favourable for both alcohol and tobacco in 1970, but the trade position had weakened by 1985. Imports of wine by volume increased

Table 9

Trade in Alcohol and Tobacco Products

Year	Balance of Trade Ratio of the value of exports to imports: Alcoholic Beverages	Balance of Trade Ratio of the value of exports to imports: Tobacco (Manufactured and unmanufactured)	Imports of Wine (Thousand hecto-litres)	Exports of Spirits (Thousand litres of Alcohol)	Exports of Cigarettes (Thousand millions)	Imports of Cigarettes (Thousand millions)
1979	1.8:1	1.0:1	4645	2959	32.0	3.2
1980	2.0:1	1.3:1	4184	2835	36.9	2.8
1981	2.0:1	1.3:1	4675	2751	41.9	2.5
1982	2.0:1	1.2:1	4520	2832	41.8	3.8
1983	1.7:1	1.3:1	5093	2570	43.3	3.0
1984	1.7:1	1.0:1	5755	2618	39.6	8.1
1985	1.5:1	1.2:1	5882	2588	39.4	12.6
First ten months 1985	1.6:1	1.2:1	4801	2140	33.6	10.84
First ten months 1986	1.4:1	1.2:1	4931	2173	25.0	10.87

Source: Overseas Trade Statistics.

by 27% over the period as spirits exports slumped by 13%. Exports of U.K. produced whisky comprise 95% of production and falling whisky exports have formed an important argument in the industry's tax lobby.

Movements in the balance of trade in tobacco are more complicated. A large part of the value of tobacco imports is made up of unmanufactured tobacco. As domestic production falls, the import bill for raw materials also falls. Changes in trade in manufactured cigarettes resulted in a growth in U.K. imports after 1979 and a growth in exports.

The analysis of Kay and Keen (1982) suggests that the structure of U.K. tax compared with other European Community countries may partly explain the growth in imported cigarettes. European cigarettes are mainly taxed on an ad valorem basis which can result in cheaper, low quality cigarettes being produced. The UK system, on the other hand, has a high specific tax which is constant in monetary value per cigarette whether the cigarette is of low or high quality. As a proportion of final price, the specific tax on higher quality cigarettes will be lower. U.K. manufacturers have, therefore, concentrated on producing higher quality cigarettes at higher cost. Imported cigarettes appear relatively cheap to the consumer.

In 1984 and 1985, retail outlets introduced generic brand cigarettes or supermarket own brands. This development together with a possible increase in the responsiveness of demand to price after successive tax hikes, also explains part of the recent growth in imports. The Chancellor, however, has not

made any concessions to the tobacco industry. The rise in imports appears to have stabilised. There was, however, a large unexplained drop in export volume in the first 10 months of 1986 compared to same period in 1985.

1.2.6. Inflation and Employment

Several broad macro-economic objectives are also taken into consideration for tax policy on alcohol and tobacco. The most important factors for the existing government have been levels of inflation and employment. Changes in excise tax have a direct effect on the rate of price changes in the economy but the effects are relatively small. The Government have already calculated that a revalorisation of all excise duties (including petrol, derv and vehicle duty) in March 1987 of 3.25% would only raise the R.P.I. by 0.3%, (Treasury, 1986).

Employment levels fell in all manufacturing industries between 1979 and 1985. The U.K. tobacco industry shed 10,000 jobs between 1979 and 1984 and has subsequently announced further factory closures. Figures (for G.B.) for June 1986 show that the industry lost 3,000 jobs in the 2 years from June 1984.

Direct employment in the alcohol industry also fell between 1979 and 1984. Employment in the U.K. brewing industry fell from 55,900 to 37,700, employment in the spirits industry fell from 27,200 to 17,700 and in the British wines, ciders and perry industry from 5,200 to 4,600. Between June 1984 and June 1986, 1,300 jobs were lost in the spirits industry (G.B.) and a further 3,000 jobs in the combined brewing, malting, cider and perry industry. (Figures taken from the Department of Employment

blamed tax policy for some of its employment loss but did not succeded in gaining the tax concessions awarded to the spirits industry. If the alcohol and tobacco industries continue to decline relative to other manufacturing sectors, their power and influence over budget policy may also diminish.

1.3. Prospective Changes in the 1987 Budget

The various objectives and constraints on budget tax policy identified above are likely to conflict, and tax policy can only satisfy a sub-section of the objectives at any one time. Chancellors must weigh up policy petitions from government Ministers, from the industry, from the public health lobby and the reaction of consumers as voters. Whatever the stated long run objectives of alcohol and tobacco policy, the reality is closer to a series of 'ad hoc' decisions. If the 1987 Budget is the last before a General Election, the Chancellor will place more value on public opinion. Excise increases are unpopular because many consumers see tax increases as raising the price against other goods even when excise is adjusted by the rate of inflation alone. Health consequences have been accepted by the public as a reason for increases in cigarette tax but not on alcohol. The difference in attitudes may be explained by the fact that the majority of voters drink whereas the number of voters who smoke are now in a minority.

Recent trends in consumption suggest that health considerations will not carry much weight in the 1987 Budget. Cigarettes are unlikely to be targetted for a further tax hike given the state of the industry and the continued fall in consumption. Alcohol duties are more likely to increase given that no changes were made in the 1986 Budget.

The tobacco industry has mounted a highly vocal campaign before previous budgets. This year's published campaign asks for a freeze on tax to halt pressure on inflation and unemployment. It also compares U.K. tax with other European Community states and claims that high U.K. tax will inhibit tax harmonisation [Stone,(1987)]. The apparent fall in cigarette exports may support these claims and lead to minimal increases on tobacco.

The spirits industry will be primarily concerned with the possibility of a trade war with the United States and the potential loss of the largest U.K. export market. Although the threat of massive tariff increases on gin by the U.S. has diminished, the uncertainty will decrease the likelihood of excise increases above the rate of inflation. Balance of trade considerations will be one objective.

Reductions in income tax are expected to form the hub of the 1987 Budget, but to achieve this objective, the Chancellor must maintain revenue from other sources. The main alternative source is oil revenue, but the yield declined in 1986. Decisions on the levels of alcohol and tobacco tax will therefore, depend on the price of oil and the rate of exchange between sterling and the U.S. dollar. If the price of oil is boyant, the Chancellor may choose to leave excise on alcohol and tobacco unchanged or to raise excise by less than 3%. An unexpected fall in oil prices before the Budget, however, is likely to lead to more severe increases in excise to make up the revenue shortfall. The balance of these objectives may alter within just a few weeks prior to the Budget.

2. ECONOMIC PRINCIPLES FOR ALCOHOL AND TOBACCO TAX

The incoming government has an opportunity to review tax policy on alcohol and tobacco after the election. There are three basic types of tax policy, all of which could be applied in the alcohol and tobacco markets. One is part of a general tax policy to raise revenue to finance economy wide policies, and the other two are prevention policies directed specifically at drinkers and smokers. All three could theoretically exist at any one time, however, the reality is that government must choose between policy alternatives. The basic economic justifications for these policy objectives are discussed below. The practical implications of choosing a non-revenue objective are examined in the final section.

2.1. General objectives for Government Policy

There are two types of government policy in welfare economics; policies aimed at improving the smooth working of the market mechanism, and policies aimed at redistributing wealth in society or altering the values people use in choice. Policies which improve the functioning of a market will raise social welfare in a market economy because individuals can satisfy their desire to consume through trade at lower cost. Economic theory cannot, however, provide any a priori reasons why policies designed to alter the distribution of wealth in society, should improve social welfare.

The economist's benchmark model, against which the real world is compared, is one where markets work freely without monopoly power and where people have the information they require for choice. Everyone can satisfy their plans to produce or consume

through trade. The highest possible level of social welfare will emerge in this type of economy, given the distribution of wealth and the existing set of social values in society. This model is used to justify any policy which can improve the efficiency of the market mechanism. The only constraint is that the cost of implementing the policy should not exceed the value of improved welfare gained.

Most markets, unlike the economist's model, do not work perfectly because there are costs to trading. In some cases the costs are so high that a market does not even exist. Imperfections often take the form of monopoly power where consumers or producers have the power to distort price which should be set by market forces alone. The result is either that too much or too little of some goods is produced and consumed to maximise social welfare. A variety of policy options are available to governments ranging from taxes and subsidies on individuals to the provision of certain goods and legal restraints on trade. Taxation therefore can be used either as a direct policy tool or as a method of raising finance to pay for indirect policy actions.

If government succeeds in removing market imperfections, it may also wish to alter the values that are used to make choices or alter relative wealth between people. These distributional policies will lead to a different maximum level of social welfare. The fact that the majority of voters may have elected a government committed to a distributional policy does not imply that social welfare must be improved. The policy may take the form of direct tax action, but must otherwise be financed out of a general revenue.

2.2 Alcohol and Tobacco Tax as General Revenue Policy

Government can choose from a variety of different taxes to raise revenue for improving the market mechanism in the economy. For example, it can use a direct tax such as income tax, or an indirect tax such as V.A.T. or excise duties. The choice of tax policy depends on the benefits of revenue raised relative to the costs of the tax. Tax costs can be grouped into three types; the costs of administration by the tax authority, the costs of compliance by the taxed party and the costs of any market distortion which the tax creates. Government will choose taxes which give the maximum benefit for the minimum cost.

Administration costs and compliance costs are self explanatory. The welfare cost or excess burden of a tax is not immediately obvious. If a tax were placed on one or more goods in a perfectly functioning economy, the taxed goods would become relatively expensive and consumers would substitute cheaper goods for them. Market choice is therefore distorted by a tax and some welfare is lost which is not balanced by the gain in revenue. Individuals no longer choose the quantity which maximises welfare.

Some taxes create more welfare loss than others. For example, broad based indirect taxation like V.A.T. and direct income tax result in less distortion between goods because they tend to reduce income across the board. The excess burden element of costs is therefore low, but their administrative and compliance costs are high. There are, however, some goods on which an excise tax would also generate a relatively low excess burden with the benefit of minimal administration and compliance costs. Alcohol and tobacco are examples of these types of goods.

The responsiveness of demand to a change in price is measured by elasticity. If a one percent rise in price results in a less than one percent fall in consumption, a good is said to be inelastic. Evidence suggests that the demand for both alcohol and tobacco tends to be inelastic [Godfrey (1986)]. This means that if a tax is levied on either good, the level of substitution will be low, and the excess burden minimal. In addition, the revenue earned will rise with an increase in tax, despite a decline in consumption.

Excise tax on alcohol and tobacco can therefore be justified as part of a government's general revenue policy to remove market failure in all markets. The low level of administration costs allow for frequent changes in excise tax and a level of policy flexibility which can only be achieved at higher cost with alternative tax systems. Government is likely to choose a range of tax policies in practice, including both excise and specific excise duties as well as direct taxes. For an excise on inelastic goods to be effective it must be levied in addition to general V.A.T..

2.3 Alcohol and Tobacco Tax as Prevention Policies

A tax on alcohol or tobacco which is deliberately intended to cause substitution away from these goods can be classed as a prevention policy. Government may choose to implement this type of policy on the basis of improving the market mechanism and raising welfare, or on the basis of altering the values drinkers and smokers place on their actions. Improving market efficiency by the use of an indirect excise tax is justified by the existence of external costs from consumption. These are the unmarketable and

unwanted costs imposed on third parties by some drinkers and smokers. Alternatively, the government may believe that people are not capable of making reasonable choices about consuming alcohol and tobacco and impose a tax to alter market choice. This is a paternalist policy of a distributional nature.

2.3.1. Externality Excise Tax

External effects may be benefits or costs, but prevention policy is associated with the existence of external costs in consumption. Social welfare is lower than the maximum attainable when external costs arise because there is no market to trade for the unwanted effect. People choose to smoke and drink on the basis of the private costs and benefits of consumption. If no market exists for trading some costs, the consumer does not have to take them into account. As a result, the relevant costs appear to be lower than they actually are, and more alcohol and tobacco are consumed than would maximise welfare.

Examples of external costs in the alcohol market are the mental and physical distress which a heavy drinker could impose on family and friends. The harm to third parties caused by a drunk driver may also comprise an external cost. Smokers may not place a high value on their health, but should value the damage to third parties through passive smoking. The risk of harm to third parties by fire also contains an element of external costs.

If government could place a value on the marginal or additional cost created by smoking and drinking, a tax equal to that value on each drink or cigarette would force consumers to take third party harm into account. An excise tax can be justified

on alcohol and tobacco, in addition to a revenue tax, to account for any external costs. It should be remembered that this tax policy is a price policy rather than a consumption policy. Government aims to alter price to reflect the full costs of consumption. If demand is highly inelastic, the fall in consumption which results from an externality tax may be relatively small.

2.3.2. Paternalist Taxation

There are several reasons why government may believe that individuals are not capable of making reasonable choices over consuming alcohol and tobacco. The most obvious is that children cannot be expected to make responsible decisions and must be protected. Another is related to the dangers of dependence associated with the social use of alcohol and tobacco. If dependence distorts the values which drinkers and smokers use to decide how much to consume, then consumers will not be capable of making responsible choices. Government can choose to impose its own valuation of the costs and benefits of drinking and smoking on some or all consumers in these cases.

Because economic theory cannot determine which set of values is 'best' for society, there is no unique target for paternalist prevention policy. It aims to reduce consumption by some or all consumers by imposing a tax on consumption. The targe may be related to a notion of safe levels, or to a general theory about the relationship between consumption and harm. A paternalis objective may be achieved by imposing an additional excise tax or an additional ad valorem tax, or both.

A paternalist prevention strategy is likely to be most effective when the demand for the good is elastic. The more

elastic demand, the smaller the tax required to achieve a given reduction in consumption. However, the inelasticity of demand for alcohol and tobacco implies that tax changes may need to be relatively large to achieve substantial reductions in consumption.

2.4 Alcohol and Tobacco Tax Objectives

Economists argue that all government policy should raise social welfare. To do so, government must eliminate market imperfections where possible and then impose equity policies in addition. Alcohol and tobacco taxation can be used to remove both alcohol and tobacco market failure and market failure in the rest of the economy. The order of priority would be to use excise to remove external market effects directly, and then to use excise on goods which were still inelastic in demand to raise revenue with V.A.T. and other taxation. Paternalist policy would finally involve placing an additional excise or ad valorem component on goods like alcohol and tobacco to further reduce consumption.

All three tax policies could be imposed on the alcohol and tobacco markets but are unlikely to co-exist because of the practical difficulties of implementing the theory. The revenue policy will be designed to finance both market efficiency and distributional policies at the same time, making accurate distinction impossible. As a result, revenue objectives are tempered by other macro-economic objectives and constraints. Government is unlikely to be able to identify the exact value of marginal external costs because they differ between consumers and with the quantity consumed. Identifying a safe level for consumption is also unlikely for similar reasons. The result of wide ranging imperfections in most markets is that objectives and policies cannot

be accurately defined. Governments must resort to generalised policy rules which lead to elements of conflict.

The final section examines two generalised rules for prevention policy tax on alcohol and tobacco as alternatives to the existing revenue based policy. Two basic policy objectives are developed from externality and paternalist motives together with a set of governing rules. The results are compared by considering the tax changes which would have been required in March 1987 to follow these rules.

3. GENERALISED PREVENTION RULES

The discussion in the previous section identified revenue and external costs as the objectives for efficiency policy in the alcohol and tobacco markets. It also identified consumption as a target for paternalist policy based on Government's assessment of 'safe' consumption levels. However, the extent of market failure both in the economy as a whole and in the alcohol and tobacco markets in particular means that government can only approximate policy to achieve a movement toward the theoretical goals. Policy objectives directed at other markets also impinge on alcohol and tobacco market policy creating additional constraints and barriers. In practice, alcohol and tobacco policy follow generalised rules towards less precise and sometimes multiple objectives.

This section briefly considers the extent to which the revenue objective has been tempered by widespread market failure. It examines the implications of a shift in policy emphasis towards

prevention for generalised policy rules on alcohol and tobacco.

3.1 The Revenue Objective

From the discussion in the first section, it is clear that governments have not pursued a simple revenue maximising rule. The objective has been to satisfy a number of revenue, trade and budgetary needs simultaneously; trading the benefits of one against the costs of another over time. Revenue aims have been balanced against equity considerations and the trade constraints of European Community membership. For example, the imposition of V.A.T. under European Commission policy led to a stagnation of excise rates in 1973. The increased rate of V.A.T. was also balanced by real reductions in excise rates in 1979. An example of equity considerations is that although demand for beer and tobacco are the most inelastic and the most appropriate targets for a revenue tax, consumption is greatest amongst low income groups.

Market failure in trade between different countries can be seen as the justification for European Community trade regulation. The objective of the Treaty of Rome is to break down both tariff and non-tariff barriers to trade. However, this policy may work in conflict with equity policies, public health policies and the revenue policies of individual member states. Any conflict which does arise will reduce the ability of the U.K. government to satisfy existing policy objectives.

Trends in consumption suggest that the popularity of cigarette and beer consumption is declining. The revenue yield from these goods is likely to decline with consumption. As a

result, the benefits of revenue from beer and tobacco could start to fall relative to the costs of maintaining the tax. Government may consider shifting the weight of tax onto wines but will be constrained by Community trade policy and the relative elasticity of demand on wines. The constraints of Community tax policy are likely to increase as proposals for tax harmonisation are implemented. Ad valorem taxes are also favoured against excise taxes as the base for harmonisation, adding to existing conflict. As a result, future government revenue policy may be limited to the general rule of maintaining revenue yields and the flexibility of response of excise to varied objectives.

3.2 Alcohol Prevention Objectives

An incoming government may consider the use of tax policy for prevention policies. The two possible approaches outlined in Section Two were those of externality taxation and consumption control. The extent of market failure in the alcohol and tobacco markets and the constraints of demand elasticity and Community trade policy also limit the precision with which these objectives can be pursued. Government would have to devise generalised rules within the limits of these constraints on the basis of less specific goals. Two sets of simple rules are discussed below. The implications for tax policy are examined by considering what might have occurred if these rules had been adopted in the March 1987 Budget.

3.2.1. The Externality Rules

According to economic theory, a tax on alcohol or tobacco set equal to the marginal external cost of consumption will raise social welfare if there is no monopoly power in either market,

and if other related markets are free from market imperfections. The policy objective is to persuade the drinker or smoker to make decisions about how much to consume as if they had to take all the relevant costs into account rather than the private costs alone. Private costs include the market price and any known personal health effects. However, there are several practical and theoretical difficulties involved in implementing this type of tax.

The most important practical barrier arises from the difficulty of measuring marginal external costs. If the marginal external costs were constant for each unit consumed, increasing in proportion to consumption for all consumers, a constant excise rate per drink or cigarette would be adequate. All that remained would be to place a value on the external cost. This in itself is difficult. There is no simple method of placing a monetary value on such intangible costs as loss of life, mental distress or impaired quality of life.

Even if the value of external costs could be assessed, it is possible that these costs increase more than proportionately with consumption. As a result, each drinker and smoker would have to be monitored to determine the tax rate. This is obviously either impossible or prohibitively costly. Also, there can be little doubt that different individuals generate different levels of external costs, and that the same individual may generate different costs at different times. The nature of market failure is so diverse that the costs of accurate tax assessment outweigh the benefits.

An important theoretical barrier to the use of an externality tax is the existence of other market imperfections in the alcohol and tobacco markets and related markets. The fact that a few companies control production in both markets implies an element of monopoly power. Producers can therefore restrict output and competition to raise price (and profits) and reduce consumption. If this effect outweighs the increase in consumption resulting from external costs, a tax will reduce consumption still further below the quantity that would maximise welfare. Market imperfections in other markets may also make the distinction between private and external costs difficult. For example, the cost of health care for a victim of a drunk driver is partially valued by national insurance and general tax contributions.

Despite the practical and theoretical barriers to accurate assessment of externality tax rates, the theory can be used to provide generalised rules for prevention tax. In the case of alcoholic drinks, the common qualitative characteristic is pure alcohol content. The costs of consumption may differ widely between consumers and drinks, but the costs are never-the-less related to alcohol content. An externality tax could therefore be set on alcohol content unless evidence proved other characteristics to be more appropriate. Externality theory highlights the importance of identifying the connection between consumption and harm.

Extending the analysis, tax per unit alcohol should be constant between drinks unless evidence suggested to the contrary. Excise per unit alcohol has traditionally been at least twice as

high on spirits than on beer or wine. There is, however, little evidence to support the hypothesis that greater levels of external costs are generated by spirit drinkers. [Wagenaar (1984); Perrine (1975); Berger and Snorkum (1985)]. In the case of tobacco although both the tar levels and the quantity consumed may be related to harm to the individual, the effect of different tobacco products on third party costs, such as passive smoking or nuisance from smoke, are not clear cut.

Tax bands should also be subject to rules depending on evidence relating to the rate of increase in external costs to consumption. It is unlikely that external costs decline with increased consumption. However, under existing tax bandings, the excise per unit alcohol may be lower on stronger drinks. The excise rates for a selection of different strength drinks are compared in Table 10. Excise rates are constant per unit alcohol for spirits and beers above the minimum tax band only.

Given current limited evidence on the relationship between external costs and consumption, a simple set of generalised prevention rules can be developed from the externality tax objective for alcohol.

1) Equalise tax per unit alcohol between drinks
2) Set tax bandings to achieve constant tax per unit alcohol within drink types
3) Revalorise tax for price changes
4) Revalorise tax for income changes

Revalorisation is a basic component of any tax policy rules based on specific excise duties.

Table 10

Excise Per Unit of Pure Alcohol according to Tax Bands at 1986

Beer	Alcohol Content per Volume (1)			
	1.2(2)%	2.0%	3.0%	4%
Excise per Unit Pure Alcohol (p)	21.5	12.9	8.6	8.6

(1) From Brewers Society Rule of Thumb

(2) Minimum strength definition for beer

(3) Minimum tax band

WINE	Alcohol Content per Volume						
	8%	12%	14%	15(1)%	17%	18(2)%	22%
Excise per Unit Pure Alcohol (p)	12.3	8.2	7.0	11.3	9.9	10.8	8.9

(1) Start of middle band

(2) Start of upper band

SPIRITS	Alcohol Content per Volume		
	35%	40%	45%
Excise per Unit Pure Alcohol (p)	15.8	15.8	15.8

Table 11 compares the rate of excise per unit alcohol between typical drinks at 1986 excise levels and shows the approximate excise change required to achieve two elements of the generalised externality rules. Excise rates have been equalised at the rate on beer plus an increase in excise of 3.25% to keep pace with general price changes. The result is a minimal change in excise rates on beer and wine but a large fallin duty on a bottle of spirits. These changes would probably be acceptable within existing Community tax rules, [E.C. (1972); (1979)], and within the judgement against the U.K. on relative rates of tax on wine and beer in 1983. [Court of Justice (1983)].

3.2.2. The Consumption Rules

Government could choose to impose its valuation of the costs and benefits of drinking and smoking when it believes the individual is incapable of making a 'reasonable' choice. This assumes that the government knows better than the individual what level of consumption will maximise welfare. There is no a priori reason why governments should impose a specific level of consumption on consumers and thereby achieve a preferred level of social welfare. However, government is likely to impose a 'safe' level if it can be identified or maintain consumption as a compromise if the policy has public support.

Paternalist policy targets such as young children can be protected by laws which prohibit consumption. The Ledermann hypothesis however is the cornerstone of proposals for alcohol control in the general population. (Bruun et al. (1979); Schmidt and Popham (1978)). In its restrictive form, the

Ledermann model relates changes in per capita consumption to changes in the proportion of heavy drinkers and related harm in a homogenous population. A reduction in per capita consumption therefore leads to a reuction in alcohol related harm. A weaker model has been adopted by the health lobby to justify tax policy. The aim is to reduce per capita consumption (to an agreed level) and reduce total alcohol related harm across the population. (Saunders (1985); Makala, Osterberg and Sulkunen (1981)).

The final price of pure alcohol is the appropriate policy to effect a change in per capita consumption because consumption usually declines as price increases. The target level for a reduction requires agreement on safer levels or the level of harm that society will tolerate. Harm in this case includes physical harm to the individual's health as a result of drinking or smoking. The paternalist apporoach to smoking policy via tax increases has involved less controversy and the Chancellor has already cited public health objectives when raising excise on tobacco. This has probably resulted from public acceptance of a more direct link between smoking and harm and a widespread notion of psychological dependence.

A number of different indicators of harm have emerged in the public health debate over alcohol consumption. Some are related to long run health effects such as liver cirrhosis, others to the accute effects of intoxication such as drink driving offences, and a few to the effects of chronic consumption, such as admissions for treatment of alcohol dependence. The Ledermann model avoids these distinctions between types of harm by identifying per capita consumption as the target for tax policy. The theoretical validity of the Ledermann model, however, has been

Table 11 Equalising Excise per Unit Alcohol at the Rate on Beer in 1986 plus 3.25% Revalorisation on Typical Drinks

Typical Drink	Excise per Unit Alcohol at 1986 (p)	Excise Change Required at March 1987 to Achieve Above Policy (p)
Beer (3.7% v/v)	8.6 per pint	+ 0.6 per pint
Wine (12% v/v)	8.2 per 70cl Bottle	+ 6.0 per 70cl Bottle
Spirits (40% v/v)	15.7 per 75cl Bottle	- 206.7 per 75cl Bottle

Table 12 Equalising Price per Unit Alcohol at the Rate on Beer in 1986 plus 3.25% Revalorisation on Typical Drinks

Typical Drinks	Price per Unit Alcohol at 1986 (p)	Excise Changes Required at March 1987 to Achieve Above Policy (p)
Beer (3.7% v/v)	35.0 /pint	+ 0.6 /pint
Wine (12% v/v)	32.0 /70cl	+ 34.5 /70cl
Spirits (40% v/v)	26.5 /75cl	+ 289.1 /75cl

questionned. [Miller and Agnew (1974); Duffy and Cohen (1978); Duffy (1980); Skog (1980)].

The practical problems of implementing a consumption tax centre on the responsiveness of demand for both alcohol and tobacco to price changes. Achieving a given reduction in consumption will require greater price increases on more elastic goods. The responsiveness of demand for alcohol and tobacco may change as a direct consequence of imposing a large tax increase. In addition, the effect of a change in tax may be temporary if incomes change over the period.

Despite the problems related to inelasticity of demand and uncertainty over 'safe' consumption levels, government could adopt some minimal generalised rules for a consumption policy. Using the Ledermann model as a basis for alcohol policy, the price per unit alcohol should be equal between drinks and within drink types. The model associates harm directly with total consumption of pure alcohol alone, leaving little justification for price differentials. Price per unit alcohol has varied considerable over time, fluctuating with changes in excise and V.A.T.. In 1964, drinkers paid 14% less for a unit of alcohol in beer than wine, but more than 70% more for the equivalent in spirits. By 1986, the situation had reversed. [see Table 12].

A simple set of consumption rules for tax policy are set out below. The first two components differ from the externality rules, but the last two rules on revalorisation are the same.

1) Equalise price per unit alcohol between drinks

2) Adjust tax bandings to equalise price per unit alcohol within drink types

3) Revalorise for changes in prices

4) Revalorise for changes in income

Figures in Table 12 compare the price per unit alcohol in typical drinks during 1986. They also show the excise changes needed to equalise price per unit alcohol at the rate on beer together with a 3.25% revalorisation in March 1987. The level for equalisation chosen is arbitrary and merely illustrates the policy rule. These rules would apply whatever the rate chosen. The result is a substantial rise in excise on wine and an increase of nearly £3.00 on excise duty on a bottle of spirits. These changes would probably break the Community regulations on tax policy.

3.3 Ad Valorem or Excise Prevention Tax

The discussion above on generalised rules for prevention policy was based on alternative objectives for excise policy. However, tobacco tax already contains an additional ad valorem component which could be used for prevention objectives. A new ad valorem component could be introduced on alcoholic drinks. The two tax systems have different implications for the type of product produced and the type of generalised rules which are appropriate.

In a market economy with no market imperfections and no brand differentiation between products of similar type, ad valorem taxes and specific taxes are equivalent. However, in an economy where producers have some control over price and products are

differentiated by quality, choice of tax structure may influence production. As Kay and Keen (1982) suggest, ad valorem taxation tends to encourage production of lower quality (lower cost) products but specific taxes have no effect on quality. In addition, product variety also decreases as the rate of ad valorem tax increases. Ad valorem taxes tend to have the same effect as an increase in fixed costs which act as a barrier to entry by new firms or for new products.

The benefit of using an ad valorem component rather than an excise tax for prevention policy is that the tax is self adjusting for price changes and may adjust for income changes if wage increases are reflected in costs and prices. However, the ad valorem element is directed at fixed costs rather than marginal costs. Governments are more likely to choose ad valorem taxes on alcohol and tobacco to affect product variety and quality or to act as protective trade measures against higher quality imports. Kay and Keen point out that European Community producers of low cost cigarettes from home grown tobacco subsidised by the C.A.P., support ad valorem taxation on tobacco. However, member states which manufacture high cost cigarettes from imported blond tobacco support excise tax systems. Ad valorem taxes can therefore increase the difference in total price between domestically produced and imported goods.

The arguments outlined above suggest that ad valorem tax in an imperfect market will not prove to be an appropriate prevention tax. The externality model identifies the characteristics of alcoholic drinks which lead to external costs as the target for tax. These are unlikely to be product and brand differences

or quality. Quality characteristics need not be related to tar content in tobacco or alcohol content in drinks. Ad valorem taxes are also likely to affect product quality and brand definition rather than the quantity consumed. Specific taxation is therefore a more appropriate system for a future prevention tax.

4. CONCLUSIONS

Government alcohol and tobacco tax policy must satisfy multiple objectives some of which are explicit, many of which are implicit. Budget changes are determined in an ad hoc fashion depending on the balance of factors at the time. The balance of revenue, trade and political objectives are likely to determine policy in the 1987 Budget.

The degree to which government can satisfy multiple objectives depends upon the flexibility of the tax system. Declining consumption of the most inelastic goods together with increasing restrictions on flexibility under European Community regulations, have increased constraints on policy choice. As a result, the benefits to revenue and trade from alcohol and tobacco tax may be declining relative to the cost of reduced flexibility. As this process continues, the likelihood of a switch to prevention policy increases.

A successful prevention policy will only emerge if Government accepts the need to adopt an explicit, coherent tax strategy. This would involve identifying the long run aims of prevention tax and the actual levels at which tax should be set. There is no evidence from existing prevention policy to suggest that future strategies are likely to be

explicitly stated. For example, tobacco policy has been a series of tax hikes, with no indication of the policy path. Future implicit strategies could, therefore, be used to mask latent revenue objectives. Government will not adopt explicit prevention policy until the health lobby can present robust evidence of the precise link between consumption and harm to quantify the trade-off between revenue and health.

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