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DRINKING IN IRELAND

A Review of Trends in Alcohol Consumption, Alcohol Related Problems and Policies towards Alcohol

BRENDAN M. WALSH

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The Medico-Social Research Board, Dublin, is also participating in ISACE, and the present study has benefited greatly from discussions with Dr. D. Walsh, who first interested me in the economic aspects of alcohol consumption in Ireland. I would also like to acknowledge the encouragement provided by Dr. Geoffrey Dean. I am also greatful to R. C. Geary, P. Mooney, D. Rottman, E. Shelley and A. D. Tussing for reading an earlier draft and providing helpful criticism.

The views expressed and any remaining errors in the paper are, however, my sole responsibility.

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General Summary

This study reviews the Irish experience over the last 20 years in regard to alcohol consumption, alcohol-related problems and policies towards alcohol.

The growth of alcohol consumption over the 1960s and 1970s has been very rapid and due both to increasing consumption per drinker and a higher percentage of drinkers in the population. By international standards, however, consumption is not exceptionally high in Ireland, although the proportion of income spent on drinking is very high.

As consumption has grown so too have some of the widely used indices of alcohol-related problems, notably hospital admissions for alcoholism, arrests for drunkenness and road accidents occurring around pub-closing time. On the other hand, the death rate for liver cirrhosis does not yet reflect the effects of higher consumption to any great extent.

A review of the economic importance of alcohol in Ireland reveals that it does not account for a major proportion of national output, employment or exports. Moreover, its contribution relative to that of other sectors has declined quite substantially in the last two decades. However the proportion of total tax revenue obtained from the excise taxes on beer and spirits remains over 10 per cent, which is very high by international standards.

A study of the tax burden on alcohol reveals that the excise taxes tended to fall in real terms during the period of accelerating inflation starting in the late 1960s, and that spirits taxation in particular declined relative to its level in earlier years. Recent budget changes have only partially reversed these trends.

The question of assessing the economic costs of alcohol abuse is discussed and illustrated with some tentative calculations based on Irish data. It seems safe to conclude that the heavy excise taxes paid by drinkers more than offsets any costs imposed on the exchequer as a consequence of alcohol-related problems. Thus, the rationale for a policy of stricter controls on drinking must be found elsewhere than in an economic analysis of the gains and losses to the exchequer.

In Section 8 of this study the options open to policy-makers anxious to curb the growth in alcohol consumption are reviewed. It is argued that the scope for curbing consumption through taxation increases of sufficient magnitude to raise the price of drink relative to the general cost of living is quite meagre. Drink is already relatively expensive in Ireland, and the econometric evidence suggests that further real price rises would tend to increase the amount spent on alcohol rather than reduce the amounts drunk. Restrictions on publicity and advertising are not judged likely to have a major impact on drinking or even on the recruitment of young people to the drinking population. Controls on where and when drink may be sold have been relaxed rather than tightened in recent years, and while a case may be made for reversing this trend, its net influence on drinking patterns is not known.

As an alternative to the approaches, it may be argued that it would make more sense to penalise those whose heavy drinking causes problems. Obvious targets would be those who drive while drunk or who are absent from work because of drinking. The problems that lie in the way of enforcing this type of policy are discussed and it is concluded that there is scope for improvement in this regard in Ireland.

The end result of this study is not a blue-print for a policy on drinking but rather a review of the situation as it has developed over the post-war period and of the range of issues that need to be taken into account in formulating policy in this area.

Section 1

Introduction

In the years ahead we are likely to see a considerable increase in efforts by the state to discourage patterns of behaviour believed to have adverse repercussions on health. Despite a general commitment to the view that the individual is the best judge of what contributes to his or her own welfare, the state appears to be increasingly willing to try to modify behaviour in directions believed to promote public health. Undoubtedly much of the impetus for this emphasis comes from the rapid escalation of public expenditure on health services and the tantalising fiscal promise of preventive measures. As Bonnie (1978) rhetorically asks "what legislator or taxpayer would forgo an opportunity to invest in one ounce of preventive programming to avoid paying a pound of cure later on?" (p. 202). High on the list of behaviours which it may be hoped could be modified with major social benefits is alcohol consumption or "alcohol abuse". This issue is particularly relevant in Ireland because of the widespread belief that the Irish are very prone to alcohol-related problems.

This is, therefore, an opportune time to survey a range of issues related to alcohol consumption in Ireland today. There is a need for objective background information against which policy initiatives can be judged, as well as for an overview of the nature and magnitude of the problem represented by alcohol abuse in Ireland today. The present study attempts to meet these needs.

The approach taken is to present basic information on the level and trend of alcohol consumption in Section 2, followed

by a summary of data on the level and trend of alcohol-related problems (such as cirrhosis deaths, admissions to hospital for alcoholism, arrests for drunkenness etc.) in Section 3. Although these two sections are primarily descriptive, there is also a discussion of the extent to which the increase in alcohol consumption can be linked with the increase in alcohol-related problems.

Section 4 takes up the crucial question of the growth in alcohol consumption that is likely to occur in the coming years, and a number of factors that may lead to a moderation of recent trends are discussed.

Section 5 documents the large, but declining, role of alcohol in the Irish economy, considering separately its contribution to employment, tax revenues and the balance of payments.

The question of measuring the economic costs of alcohol abuse is discussed from a methodological viewpoint in Section 6, and the tentative calculations presented in Appendix A are used to illustrate the point that there is a net gain to the exchequer as a result of drink in Ireland. The implications of this finding are explored in this section.

In view of the central place of alcohol prices and taxation in many discussions of alcohol control, Section 7 provides background information on these variables for Ireland over the period since 1950.

These first seven sections set the stage for an exploration of control policies, which is undertaken in Section 8. In the first part of this section the scope for using the price of drink as a way of moderating the growth of consumption is explored. Drawing on the econometric results regarding elasticities summarised in Appendix B it is shown that very substantial price increases would be required to offset the effect of rising income on the growth of alcohol consumption. The social and political limitations of this approach are discussed.

The second part of this section explores the potential for advertising controls in curbing alcohol consumption. Drawing on a summary of the international research in this area it is

concluded that it would be unrealistic to expect too much either from curbs on drink advertising or from health education campaigns to discourage excessive drinking.

The third possible control policy explored is limitation of the availability of alcohol. The key issue in this area seems to be the political feasibility of reversing the trend towards liberalisation which has been apparent since the early 1960s.

The review of control policies presented in Section 8 is a sceptical one. This is not meant to be negative, but rather to serve as a warning to those who espouse apparently simple solutions (such as heavier taxation) to what is in fact a very complex issue. In the concluding Section 9 the broad question of what should be done about alcohol in our society is taken up. The ambivalence of our attitudes even towards such apparently clear cut issues as drunken driving is discussed, and the question is raised whether we are really convinced that there is, or is likely to be, a serious problem of alcohol abuse in Ireland, and if so whether this problem is to any great extent amenable to control policies. Although running some risk of being construed as a predominantly negative contribution to the debate, Sections 8 and 9 are intended to be a critical but constructive examination of the difficulties of defining exactly what we can hope to achieve through a policy towards alcohol in Ireland in the years ahead.

Section 2

The Trend of Alcohol Consumption and Expenditure on Alcohol

The growth of consumption of alcoholic beverages in Ireland over the period 1950-79 is shown in Table 1 and Chart 1. Over the 29-year period alcohol consumption per person aged over 14 rose by 113 per cent or at an annual average rate of 2.6 per cent. The growth rate was much higher—4.5 per cent—during the years of rapid economic growth from 1961 to the onset of the recession in 1975. The effect of this recession on the growth of consumption seems to have been temporary. The relationship between the growth of income and alcohol consumption is explored econometrically in Appendix B, where it is seen that alcohol consumption is highly sensitive to income, tending to increase more than proportionately with changes in income, all other things remaining equal.

An important feature of the trend of alcohol consumption in Ireland has been the more rapid growth of consumption of spirits and wine than of beer. In 1950 only 28 per cent of our alcohol was consumed in the form of spirits and wine, compared with almost 40 per cent in 1978. Most of the growth in the share of spirits and wine in the alcohol market occurred during the 1960s and 1970s. It is also notable that the rate of growth of alcohol consumption in Ireland has in recent years outpaced that recorded in neighbouring countries. We have now drawn level with the United Kingdom in terms of consumption per person aged over 14, whereas in the mid-1960s our consumption was about one-quarter below the British level (Keller and Gurioli, 1976). However, despite this tendency for Irish consumption to grow at a faster rate than

Table 1: *Alcohol consumption per head of population aged 15 and over in litres of 100 per cent alcohol 1950-79*

	Beer	*Spirits*	*Wine*	*Total*
1950	3.34	1.20	0.13	4.67
1951	3.56	1.21	0.14	4.91
1952	3.34	0.95	0.12	4.41
1953	3.29	0.98	0.13	4.40
1954	3.29	1.06	0.14	4.49
1955	3.39	1.08	0.15	4.62
1956	3.48	1.05	0.15	4.68
1957	3.40	0.99	0.15	4.54
1958	3.31	1.03	0.15	4.49
1959	3.43	1.08	0.16	4.67
1960	3.48	1.15	0.17	4.80
1961	3.73	1.38	0.19	5.30
1962	3.75	1.30	0.19	5.24
1963	3.84	1.39	0.21	5.44
1964	3.97	1.50	0.24	5.71
1965	4.02	1.56	0.25	5.83
1966	4.03	1.53	0.24	5.80
1967	4.10	1.56	0.25	5.91
1968	4.27	1.73	0.27	6.27
1969	4.59	1.93	0.28	6.80
1970	4.76	2.06	0.31	7.13
1971	5.04	2.21	0.32	7.57
1972	5.31	2.43	0.35	8.09
1973	5.65	2.75	0.40	8.80
1974	6.19	2.82	0.43	9.44
1975	5.81	2.91	0.43	9.15
1976	5.59	2.83	0.43	8.85
1977	5.63	3.00	0.46	9.09
1978	5.79	3.35	0.56	9.64
1979*	6.05	3.30	0.61	9.96

Data Sources: *Annual Reports of Revenue Commissioners; Irish Statistical Bulletin.*

Notes: (1) The Revenue Commissioners' data refer to "net duty paid" beer (imported and home-made); spirits and wine "retained for home use".

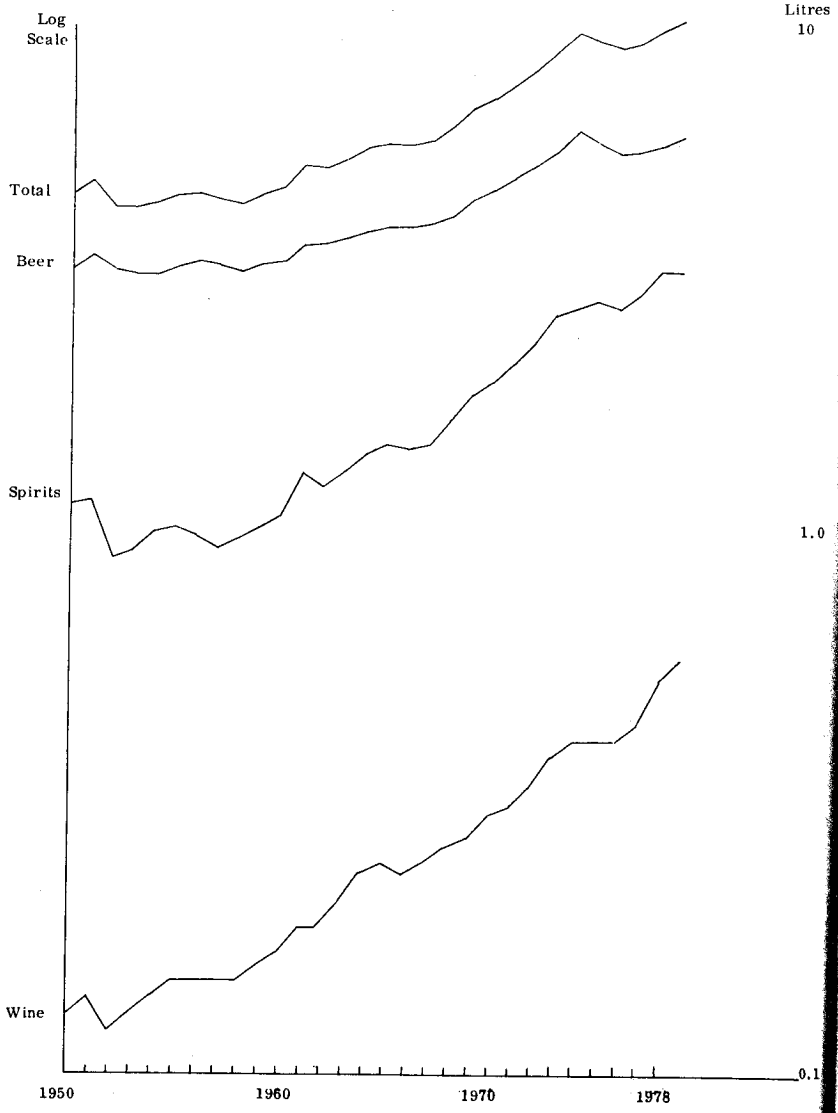
(2) A standard barrel of beer, proof gallon of spirits, and gallon of wine were taken as equal to 7.86, 2.6 and 0.568 litres of absolute alcohol respectively.

(3) Up to 1974 the data were for years ending on 31 March. Weighted averages of adjacent years have been taken to obtain calendar year figures.

(4) These quantities include consumption by visitors to Ireland but exclude consumption by Irish people while abroad.

*Provisional

Chart 1. Consumption of Alcoholic Beverages per Head of Population Aged 15 and over 1950–1979 (in litres of 100 per cent alcohol)



that observed in other European countries, we still retain our position near the bottom of the international "league table" of alcohol consumption per person. This may be confirmed from Table 2, which summarises the available data on international consumption levels. The extreme position of France and Portugal is notable, but a study of trends over time in alcohol consumption in these countries reveals a levelling off and hence

Table 2: *Consumption of alcohol in selected countries, mid-1970s*

Country	*Year*	*Litres of absolute alcohol per person aged 15 and over*
Portugal	1974	23.4
France	1972	22.4
Germany (FR)	1974	14.8
Belgium	1973	14.4
Austria	1972	14.1
Switzerland	1971-73	13.9
Italy	1973	13.6
Australia	1973	13.3
Spain	1971	12.8
New Zealand	1972	12.6
Denmark	1973	10.9
Canada	1974	10.8
Netherlands	1974	10.6
USA	1975	10.5
UK	1974	10.2
Ireland	1974	9.4
Finland	1973	7.6
Sweden	1973	7.0
Norway	1974	5.6
Israel	1974	3.2

Source: Keller and Gurioli (1976), Table 10.

a tendency for the gap to narrow between them and countries such as Ireland which have experienced rapid growth (Keller and Gurioli, Table 11).

The paradox that despite our comparatively low *per capita* consumption of alcohol, expenditure on alcohol is very high in Ireland in relation to incomes, has been discussed in an earlier publication (Walsh and Walsh, 1973). In Table 3, the proportion of (a) personal disposable income and (b) personal expenditure on goods and services devoted to purchasing alcohol over the period since 1960 is set out. Both these measures of the importance of drinking in Ireland show a marked increase over the two decades, especially during the years up to 1971. The proportion of income spent on drink in Ireland is much higher than that recorded in other western countries today. Our nearest rivals are Finland and the UK, where the proportion of total expenditure devoted to alcohol is about 7 per cent, compared with over 12 per cent in Ireland, (Table 4). In Poland the proportion of income devoted to alcohol appears to be very high, but comparisons with a socialist system of national accounting are difficult to make because of the undervaluation of expediture on services. We would have to go back to Victorian Britain to find a higher figure than the contemporary Irish one: expenditure on drink as a proportion of total consumption reached a peak of 15 per cent in the UK in 1876 (Dingle, 1972).

It would, however, be mistaken to infer directly from the statistics on expenditure on drink that the Irish devote an excessive amount of resources to producing and distributing alcoholic beverages. Approximately half the total outlay on drink is accounted for by taxes (this point is discussed in more detail in Section 5). The remainder of the outlay, that is, about six per cent of personal consumer expenditure, covers not only the costs of producing and distributing alcoholic beverages but also the rental, heating and other expenses of licenced premises where most Irish drinking takes place.

Table 3: *Expenditure on alcoholic beverages as percentage of (a) total personal disposable income and (b) personal expenditure on goods and services, 1960-77*

	Expenditure on alcohol as percentage of disposable personal income	*Expenditure on alcohol as percentage of personal expenditure on goods and services*
1960	7.6	8.2
1961	7.6	8.5
1962	8.2	9.1
1963	8.4	9.2
1964	8.4	9.4
1965	8.7	9.7
1966	8.8	9.8
1967	9.0	10.1
1968	9.1	10.1
1969	9.4	10.9
1970	10.0	11.5
1971	10.2	11.6
1972	9.6	11.4
1973	9.3	11.5
1974	9.4	11.5
1975	9.6	12.7
1976	10.4	13.2
1977	9.7	12.3

Source: National Income and Expenditure, (NIE) 1977, Table A. 11 and earlier editions.

Notes: Personal disposable income = Personal income *less* taxes on personal income and wealth. NIE items 90 minus 92

Personal expenditure on goods and services = Personal disposable income *less* savings, NIE item 121.

All magnitudes measured at current market prices.

There figures include drink purchased by tourists while visiting Ireland, but exclude drink purchased by Irish people while outside Ireland. In 1968 Ireland had a net favourable balance from tourism of 4.3 per cent of personal expenditure, but by 1977 this had fallen to 1.4 per cent, so correction for this factor would have very little influence on the more recent figures in this table.

Table 4: *Expenditure on alcoholic beverages as a percentage of total personal expenditure on goods and services in related countries, 1975-77*

	1975	*1976*	*1977*
Belgium	3.8	3.9	4.0
Canada	3.6	3.6	3.5
Finland	6.6	6.5	6.2
France	2.6	2.4	2.3
Greece	2.7	2.6	2.8
Israel	1.0	0.9	0.9
Ireland	12.8	13.2*	12.3*
Italy	2.8	2.5	2.3
Netherlands	2.4	2.2	2.1
Norway	3.9	3.7	3.7
Poland**	13.2	—	—
Sweden	4.7	4.7	4.6
UK	7.8	8.0	7.9
USA	1.6	1.5	1.4

Data Source: UN Yearbook of National Accounts Statistics, 1978

Table refers to "Private Final Consumption Expenditure by Object, in Purchasers' Values, at Current Prices".

* From Irish NIE (see Table 3)

** "Consumption of Alcoholic Beverages as percentage of personal expenditure on goods and material services" – data from Central Statistics Office, Warsaw (GUS)

The National Prices Commission, in their Monthly Report of December 1977, provide the following breakdown of retail expenditure on alcoholic beverages in a licensed bar: (%)

	½ glass of Irish whiskey	*1 pint stout*
Distiller/Brewer	14	25
Exchequer (excise + VAT)	46	46
Retailer	40	29
Total cost	100	100

Following various changes in the trade price and in taxation, the approximate situation in March 1980 was that the exchequer (excise + VAT) content of a half glass of Irish whiskey was 56 per cent and of a pint of stout 47 per cent.

These figures illustrate the relatively small proportion of total expenditure on drink that represents the cost of producing the beverages, and the very large share represented by excise and value added taxes. The high proportion of the consumer's budget devoted to purchasing drink in Ireland is, however, important evidence of the attachment of the Irish to alcoholic beverages and their willingness to forgo other items in order to secure a desired level of alcoholic intake. The econometric evidence suggests that expenditure on drink rises at least in proportion to increases in income, and that higher real alcohol prices result in higher expenditure on drink rather than decreased consumption (see Appendix B).

Another important point that should be kept in mind in making comparisons, either between households or between countries, of expenditure patterns is the question of which items are included or excluded in total personal expenditure. In Ireland, health and housing are very heavily subsidised items (especially for the lower socio-economic groups) and hence their importance in the household budget is relatively low, but this does not imply that drink pre-empts these items of expenditure. This issue is taken up again in connection with household expenditure patterns in Section 8.

Section 3

The Trend of Alcohol-Related Problems

Recent discussion of alcohol-related problems has been greatly influenced by Lederman's hypothesis, which is generally understood to show that the proportion of excessive drinkers in a population is closely related to the *per capita* consumption of that population (see Lederman, 1956). Because Lederman assumed that drinking patterns have a log-normal distribution, it follows from his hypothesis that the number of heavy drinkers in a population rises more rapidly than *per capita* consumption. This hypothesis has been largely responsible for the growing acceptance of the view that the best way to lower the incidence of problem drinking in a country is to reduce the average level of drinking in the country.

The statistical basis of the Lederman hypothesis has been shown to be deficient, and the correlation between average consumption and such indices of alcoholism as deaths from liver cirrhosis or hospitals admissions for alcoholism is by no means as close as a strict adherence to Lederman's ideas would suggest (Duffy, 1977). In the Irish case it must be borne in mind that a significant amount of the recent growth in *per capita* consumption has been due to the fall in the number of abstainers in the population, and that the newly recruited drinkers are likely to have relatively low consumption, which would tend to weaken the association between the growth in consumption per head of total population and consumption per drinker. Apart from the other criticisms that have been levelled at Lederman's hypothesis, this factor alone would tend to reduce its relevance, in the short-run at least, in Ireland.

Despite these reservations, it seems obvious that in a general way there tends to be some correlation between average alcohol consumption and the incidence of alcohol-related problems. In this section all that is attempted is a summary of the trend of the main indicators of alcohol-related problems over the period of the recent rapid rise in average alcohol consumption and a brief commentary on the apparent relationship between consumption and the indices of alcohol abuse.

Deaths from liver cirrhosis are widely regarded as one of the most important objective indicators of the incidence of alcohol abuse. There are, however, two difficulties in using the cirrhosis death rate as an index of excessive drinking. In the first place, not all cirrhosis deaths are attributable to alcohol abuse. The proportion due to other causes may vary from time to time or place to place, causing the cirrhosis death rate to fluctuate for reasons unrelated to the level of heavy drinking. Secondly, there may be variations in the accuracy with which cirrhosis is reported as the cause of death. Duffy and Dean (1971) investigated the reporting of cirrhosis mortality in Ireland and concluded that even when allowance is made for the under-reporting of deaths from this cause, the cirrhosis mortality rate is very low by international standards. This led them to conclude that "alcohol consumption in the case of Ireland does not apparently affect the incidence of cirrhosis" (p. 396). None the less, it has been noted that there is a significant correlation over time between cirrhosis mortality and alcohol consumption in Ireland (Walsh and Walsh, 1973). In Table 5 the cirrhosis mortality rate since 1961 is set out, and it may be seen that there is some evidence of an upward trend in this rate, especially among women. However, the fact that over the period when alcohol consumption *per capita* rose by over 100 per cent the cirrhosis death rate increased by less than 50 per cent suggests that, contrary to the Lederman hypothesis, the extreme physical consequences of heavy drinking rise much less than the average level of drinking. Moreover, the female death rate from cirrhosis is almost as high as the male, which is surprising in a

Table 5: *Death rate from cirrhosis of the liver per 100,000 Population aged 15 and over, Ireland, 1961-77*

	Males	*Females*	*Both sexes*
1961	4.3	2.5	3.4
1962	5.1	3.1	4.1
1963	4.5	2.3	3.4
1964	5.7	2.2	4.0
1965	6.0	3.0	4.5
1966	3.6	2.2	2.9
1967	5.3	2.3	3.8
1968	5.2	3.9	4.5
1969	6.3	4.1	5.2
1970	6.1	3.6	4.9
1971	4.3	2.9	3.6
1972	6.1	4.6	5.4
1973	5.8	4.2	5.0
1974	7.1	3.8	5.4
1975	4.8	4.2	4.5
1976	6.4	4.1	5.2
1977	5.6	4.4	5.0

Source: Annual Reports on Vital Statistics

condition supposed to be closely related to the incidence of heavy drinking. However, the evidence discussed here relates to a relatively short period of time, and does not preclude the possibility that the effects of the increase in alcohol consumption will be more clearly reflected in the cirrhosis death rate in the longer run. The evidence presented by Blaney (1973/74) points to a close association between alcohol consumption and the cirrhosis death rate in Ireland in the first quarter of the present century.

The admission rate to mental hospitals for the diagnoses "alcoholism" and "alcoholic pyschosis" is another frequently used index of alcohol-related problems. The data for the

period 1965-77 are shown in Table 6 (earlier years are not available). It may be seen that this rate more than trebled over this 13-year period. The Irish rate is now some five times that found in England and Wales, although higher rates are recorded in Finland. It is obvious, however, that great caution must be used in interpreting this statistic because hospital admissions data are influenced by the type of treatment facilities on offer to the public and general attitudes towards availing of treatment for the problem of excessive drinking. In Ireland there has been an increasing emphasis in recent years on the disease concept of alcohol, which has as its corollary higher expectations among the public regarding the efficacy of medical treatment for the problem. These developments may

Table 6: *Admission to psychiatric facilities for the diagnosis of alcoholism or alcoholic psychosis 1965-77*

	Rate per 1,000 population aged 15 and over					
	All admissions			*First admissions*		
	Both sexes	*Males*	*Females*	*Both sexes*	*Males*	*Females*
1965	0.83	1.40	0.26	0.35	0.62	0.09
1966	0.89	1.47	0.30	0.40	0.68	0.13
1967	1.01	1.66	0.35	0.43	0.71	0.15
1968	1.26	2.17	0.35	0.54	0.94	0.14
1969	1.44	2.45	0.41	0.59	1.00	0.17
1970	1.52	2.58	0.45	0.62	1.05	0.18
1971	1.82	3.03	0.60	0.75	1.25	0.26
1972	2.00	3.39	0.60	0.82	1.39	0.24
1973	2.30	3.83	0.77	0.95	1.56	0.33
1974	2.50	4.15	0.84	0.97	1.61	0.32
1975	2.75	4.48	1.02	1.01	1.64	0.37
1976	2.75	4.46	1.04	1.02	1.62	0.37
1977	3.01	4.91	1.11	1.12	1.83	0.41

Source: O'Hare and Walsh, 1979, and earlier years.

account for some of the increase in hospital admissions, independently of any change in the underlying incidence of problem drinking. The Scottish experience in recent years appears very similar to the Irish, with the increase in hospital admissions for alcoholism outstripping the increase in consumption of alcohol (Kendall, 1979), whereas in California, for example, the alcoholic population of mental hospitals has decreased sharply in response to a major shift in mental health care towards community based detoxification centres (Bunce *et al.* 1980). In the Irish case it is interesting to note that the higher professional socio-economic group has one of the highest admission rates for alcoholism (O'Hare and Walsh, 1979, Table 11). It is possible that professional people are more likely to seek medical treatment for heavy drinking than are others, even though their intake of alcohol may not be exceptionally high. Consistent with this view is the fact that the average length of hospital stay for higher professionals admitted for alcoholism is much shorter than that for unskilled manual workers, another group with a high admission rate. These points illustrate how much care must be taken in drawing inferences from the overall hospital admissions rate to the level of problem drinking in society. In any event, the increase in the hospitals admissions rate of 300 per cent over a period when average alcohol consumption rose by only 70 per cent can hardly be explained even by a strict interpretation on the Lederman hypothesis, and factors other than the growth in consumption and in the incidence of problem drinking must be invoked to account for the rapid growth in admissions. However, despite all these caveats, the hospital data are important evidence of the gravity of the problem of alcohol abuse in Ireland today. It may be seen from Table 6 that while males continue to have a much higher admission rate than females, the female rate has been increasing more rapidly than the male.

In Table 7 the prosecution rates for "drunkenness" and "drunken driving" over the period 1961—78 are set out. Both

rates have risen over the period, but the increase in the prosecutions for drunken driving is the more striking. This series is, of course, greatly influenced by legislation and in particular the introduction of the blood alcohol level test in 1971.[1] The fact that in 1977 a police force with a growing volume of work due to a rising level of serious crime dealt with over ten thousand crimes of drunkenness or drunken driving compared with fewer than four thousand in 1961 suggests that there has been a genuine increase in alcohol-related lawlessness.[2]

There is some evidence that concern at the extent of alcohol abuse among young people is more widespread in Ireland than in Britain. Despite the fact that there was a higher proportion of non-drinkers and a lower average intake of alcohol among Irish than English youths, O'Connor (1978) reports that a much higher proportion of Irish than English youths considered drink to be "a problem among the youth". Even more striking is the contrast between the 30 per cent of Irish mothers, compared with only 10 per cent of their English counterparts, who said that "drinking is the most serious problem in this country". This response must, however, be interpreted in light of the fact that it was elicited in the course of an interview concerned with drinking habits.

The only indication provided in O'Connor's survey as to the nature of the problems believed to be caused by excessive drinking is the response of the interviewees as to their own experience of drinking problems during the previous year. Forty five per cent of Irish male youths confessed to a problem, compared with only 27 per cent of British males (op. cit. Table 7). By far the most frequently mentioned problem in both countries was "arguments with friends", but the greatest contrast between Irish and English youths was the 16 per cent

[1] The legislation was passed in 1968, to take effect in November, 1969, but its introduction was delayed by administrative difficulties until 1971.

[2] Although international comparisons of crime statistics must be treated with caution, it is of interest to note that the prosecution rate for drunkenness and drunken driving in England and Wales in 1975 was almost exactly the same as that in Ireland.

of Irish males, compared with only four per cent of English males, who mentioned "money problems due to drinking". This finding is of relevance to the discussion in subsequent

Table 7: *Prosecutions relating to drunkenness, Ireland, 1961-78, per 1,000 population aged 15 and over*

	Offence	
	Drunkenness rate	*Drunken driving rate*
1961	1.6	0.3
1962	1.6	0.5
1963	1.6	0.5
1964	1.7	0.6
1965	1.8	0.7
1966	1.8	0.6
1967	1.8	0.6
1968	1.8	0.6
1969	1.6	0.7
1970	1.4	0.6
1971	1.6	1.0
1972	1.6	1.2
1973	2.1	1.6
1974	2.2	2.2
1975	2.2	1.8
1976	2.1	1.3
1977	2.6	1.8
1978	na	2.8

Source: *Statistical Abstract,* offences relating to intoxicating liquor laws, and Parliamentary Debates, Dail Eireann, Vol. 320, No. 3, (1 May, 1980) p. 501

Note: "Drunkenness" refers to prosecutions for drunkenness simple or with aggrevation (there are about equal numbers of each type of offence). "Drunken driving" refers to "driving or attempting to drive while drunk" and more recently, includes refusals to give a breath/blood/urine sample.

sections of this paper of the effectiveness of price as an alcohol control measure. The overall impression conveyed is that although drinking may give rise to disputes and fights among Irish youths, and absorb an inordinate proportion of their spending money, the incidence of more serious problems related to health or employment is low and very similar to that reported among British youths.

Mention should also be made of Lynn's (1971) view that "the amount of alcohol consumed in a society is a function of the anxiety level of the people" (p.27). He claims to show in this monograph that the low level of alcoholism in Ireland by international standards is part of an underlying syndrome which he identifies as a low level of anxiety. Lynn's discussion of the statistics relating to alcoholism in Ireland, although based on the data for the 1960s or earlier, serves to remind that several indices of alcoholism are relatively low in Ireland, and that it is by no means easy to establish that the problem of alcohol-abuse is particularly acute here.

In summary, there has been an increase in the incidence of some indices of alcohol abuse, notably admissions to hospital for alcoholism and prosecutions for drunkenness and drunken driving, over the recent period of rapid growth in alcohol consumption. However, deaths from liver cirrhosis have risen much less rapidly than alcohol consumption. Although we have no historical data on attitudes towards alcohol, the results of a recent survey indicate that it is regarded as a serious problem by the Irish public.

Section 4

Projections of Alcohol Consumption

Caution must be exercised in attempting to project the future growth in alcohol consumption in the light of the experience of the period 1961-75. While standard econometric analysis of Irish data indicates that the income elasticity of demand for alcohol is relatively high, and the price elasticity fairly low (see Appendix B), it must be borne in mind that medium- or long-term projections of consumption are very sensitive to a variety of technical considerations as well as to the particular time period covered by the data used in the econometric analysis. It would be unwise to assume that even if we repeat in the 1980s the rapid economic expansion achieved between 1961 and 1974 we would again experience the rate of growth of alcohol consumption that was recorded during those years. There are a number of factors that suggest the possibility of a moderation in the growth of alcohol consumption in Ireland in the longer term.

To illustrate these factors, it is helpful to think of the consumption of alcohol per person (aged 15 and over) as made up of two components, namely, consumption per drinker and proportion of the population (aged 15 and over) that drinks:

$$\frac{\text{Consumption of Alcohol}}{\text{Population (15 and over)}} = \frac{\text{Consumption of Alcohol}}{\text{Drinkers}} \times \frac{\text{Drinkers}}{\text{Population (15 and over)}}$$

(A more detailed analysis would take into account the facts that the first term on the right-hand side can be regarded as the product of "frequency of drinking" and "consumption per

drinking session".) The rapid growth of alcohol consumption in Ireland since 1961 has been due to significant growth in both of these factors. It is not possible to document each source of growth with precision, but we know from market research and other survey sources that the proportion of the adult population that is abstinent ("teetotallers") has fallen in recent years. According to one source, for example, the proportion of the population aged 18 and over who had drunk some alcohol during the week prior to interview rose from 27 per cent in 1964 to 41 per cent in 1975. Between 1968 and 1974 the proportion who had consumed alcohol during the year prior to interview rose from 53 to 62 per cent. The proportion of drinking rose most rapidly among women (from 32 to 48 per cent) and people aged 18-24 years old (from 46 to 66 per cent).[3] In the 1972 study of Irish and English drinking habits mentioned earlier, it was found that the proportion of non-drinkers was higher among Irish than English youths; one-quarter of the Irish females, and one in ten of the males, said they were non-drinkers, compared with fewer than one in twenty of either sex in England (O'Connor, 1978, p.78). There is, therefore, room for continued growth in alcohol consumption due to further growth in the proportion of the population that drinks, but as this proportion rises an upper limit is approached and the contribution of this factor tapers off.

It is possible to provide a rough estimate of how much of the growth in *per capita* consumption over the period 1968-74 has been due to the increasing proportion of the population that drinks, and how much to increased consumption per drinker. The data in Table 8 suggest that somewhat less than half the total growth is attributable to the declining proportion of non-drinkers, but obviously the contribution of this factor will tend to taper off as an upper limit to the proportion of the population that drinks is approached.

[3] These estimates are derived from market research conducted on behalf of one of the companies involved in the Irish drink trade.

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Table 8: *Estimates of the components of growth of alcohol consumption per head of population aged 15 and over.*

	Consumption per person aged 15 and over (litres/year)	*Estimated proportion of drinkers in population aged 15 and over per cent*	*Estimated consumption per drinker (litres/year)*
1968	6.45	48	13.5
1974	9.27	57	16.3
Annual average growth rates, 1968-74	6.2%	2.9%	3.2%

It is difficult to anticipate whether or when there is likely to be a levelling-off in the consumption per drinker. Examples of this phenomenon can be cited from the past. In the 1870s consumption of alcohol reached a peak in England and gradually declined towards the end of the century, despite the growth in real income. Dingle (1972) attributes this levelling off to the spread of new and cheaper consumer goods (implying a rise in the relative price of drink) and the gradual adjustment of the working classes to their new-found prosperity. In France alcohol consumption has declined slightly from the very high levels reached earlier in the present century (Keller and Gurioli, Table 11), perhaps due to the reduced role of drinking with meals and despite the increased importance of drinking apart from meals. In Ireland, both illicit spirits distillation and the consumption of taxed spirits declined sharply towards the end of the nineteenth century and this was followed by a sharp decline in all the available indices of alcohol-related problems (Blaney, 1973/74). Irish consumption, at present close to 10 litres of alcohol per person aged over 14, is not exceptionally high by international standards so that there is no obvious reason to anticipate an immediate levelling off in consumption.

None the less, we must be sceptical of projections of alcohol consumption that consist of little more than extrapolations of the correlation between the growth in income and in drinking

over the last two decades. This growth might represent a once and for all transition to new patterns of consumption, associated with the new prosperity of many groups and the fundamental social changes that have occurred in Ireland over this period. Alcohol could now, more or less, spontaneously decline in relative importance in our society, as occurred towards the end of the nineteenth century in Britain. Another possibility is that a steady increase in the more conspicuous types of alcohol-related problems such as public drunkenness, drunken driving, and hospitalisation for alcoholism, could lead to a less tolerant attitude towards drinking and the implementation of effective control measures and a decline in average consumption.

These considerations render the prospect of another doubling of *per capita* alcohol consumption before the end of the century less probable than it might appear at first sight, but significant further growth in consumption – and presumably in the incidence of alcohol related problems – is none the less very likely to occur.

Section 5

The Economic Importance of Alcohol in Ireland

The most obvious economic role of alcohol in the Irish economy is the very high burden of taxation it bears. Within the EEC, Ireland, the UK, and Denmark are exceptional in the extent to which they rely on excise taxation of alcohol (and tobacco) as a source of tax revenue. But even within this group of three, Ireland is exceptional, obtaining about 12 per cent of all tax receipts from the excise taxes on alcohol, compared with only five per cent in the UK (Table 9). Inclusive of the VAT

Table 9: *Excise duties on alcoholic beverages as a percentage of all tax revenues excluding social security payments and contributions to the EEC, 1971-75*

	1971	*1972*	*1973*	*1974*	*1975*
Belgium	1.74	1.73	1.59	1.55	1.46
France	1.68	1.80	1.75	1.67	1.70
Germany (FR)	2.18	2.27	2.08	2.00	1.94
Italy[1]	1.09	1.09	1.16	0.93	0.70
Luxembourg	1.32	1.49	1.33	1.24	1.40
Netherlands	1.96	2.01	1.85	1.81	1.76
Denmark	3.79	3.70	3.34	3.29	3.54
Ireland	12.19	11.76	11.89	11.50	11.72
UK	5.65	5.85	5.12	4.63	4.82

[1]Beer and spirits only

Notes: (a) These figures exclude the revenue (where relevant) from VAT of the sale of alcoholic beverages, which in Ireland contributed a further 2.6 per cent of total tax receipts in 1975.

(b) The Irish figure for 1977 was 11.0 per cent.

Sources: Sulkunen (1978), Table 26. Based on Statistical Office of the European Communities, *Tax Statistics 1970-75*.

receipts from the sale of alcohol would make the Irish situation even more unusual.

This heavy dependence of the exchequer on revenue from alcohol taxation is of long standing in Ireland; indeed the growth of other sources of tax revenue has led to some decline in the importance of alcohol taxes, which contributed almost 16 per cent of total revenue in the early 1960s and 18 per cent in the early 1950s. The declining share of excise taxes on alcohol in total revenue is clear from Table 10.

Heavy dependence on revenue from drink taxes was also a feature of the UK economy in the past: in the 1880s over 40 per cent of British Exchequer receipts came from excise taxes on drink (Harrison, 1971, p. 346). A rapid decline in the relative importance of this source of tax revenue is a natural development as other taxes, notably income and value added taxes, assume greater importance. None the less, it must be borne in mind during any discussion of alcohol control policies in Ireland that it is still the case that a major decline in alcohol consumption could have serious fiscal repercussions.

Direct employment in the production of alcoholic beverages is not of major importance to the Irish economy, and has declined both absolutely and relative to total employment in the last two decades (Table 11). The retail distribution of alcoholic beverages, especially through public houses, provides more employment than the production of alcoholic drink. Additional employment is, of course, provided in the sectors supplying raw materials and other inputs to the drink industry. The most important domestic input is barley grown by Irish farmers under contract to brewers and distillers. This is of considerable significance in some regions of the country.

In assessing the economic importance of the alcoholic beverages industry to the economy what matters is not so much how many people or other resources are currently dependent on the industry for employment, but rather how specific to the industry these resources are. While it is obvious that much of the labour force, plant and equipment, and other resources currently dependent on the industry in Ireland are fairly

Table 10: *Excise tax receipts from beer, spirits and wines as a percentage of (a) Total net receipts of exchequer and (b) Total taxes on capital, income and wealth. 1950-78.*

Year ending March 31	*Beer*		*Spirits*		*Wine*		*All alcoholic beverages*	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
1950	7.72	5.88	9.79	7.45	.73	.56	17.81	13.56
1951	7.71	5.83	10.32	7.79	.71	.53	18.74	14.15
1952	7.68	5.84	9.37	7.12	.70	.53	17.75	13.49
1953	10.06	7.73	7.45	5.73	.49	.37	17.99	13.83
1954	10.15	7.56	8.57	6.38	.53	.40	19.24	14.34
1955	9.41	7.00	8.80	6.55	.55	.41	18.76	13.96
1956	9.22	6.87	8.42	6.28	.52	.39	18.15	13.53
1957	8.66	6.44	7.46	5.55	.50	.37	16.62	12.36
1958	8.83	6.52	6.74	4.98	.44	.33	16.02	11.82
1959	8.56	6.25	7.06	5.16	.45	.33	16.07	11.74
1960	8.65	6.40	7.03	5.20	.44	.32	16.12	11.93
1961	8.26	6.00	7.15	5.20	.44	.32	15.85	11.51
1962	8.02	5.86	7.81	5.71	.45	.33	16.27	11.89
1963	8.37	6.21	6.94	5.15	.40	.29	15.71	11.66
1964	7.84	5.79	7.07	5.22	.39	.29	15.30	11.29
1965	7.50	5.85	6.51	5.08	.36	.28	14.36	11.20
1966	7.55	5.78	6.53	5.00	.44	.34	14.51	11.12
1967	8.25	6.35	6.34	4.88	.37	.29	14.96	11.52
1968	8.17	6.31	5.91	4.57	.36	.28	14.44	11.16
1969	8.50	6.53	6.20	4.77	.42	.32	15.12	11.63
1970	9.45	7.34	6.55	5.09	.45	.35	16.46	12.79
1971	8.42	6.59	6.07	4.75	.44	.34	14.93	11.68
1972	8.23	6.41	5.96	4.64	.38	.30	14.57	11.35
1973	7.68	5.96	5.93	4.60	.39	.30	14.00	10.87
1974	7.20	5.69	6.11	4.83	.36	.29	13.69	10.81
1974 (9 months)	7.69	4.26	5.81	3.22	.37	.21	13.87	7.68
Year ending Dec 31								
1975	7.34	5.63	5.41	4.15	.38	.29	13.12	10.07
1976	7.46	5.77	5.06	3.92	.36	.28	12.88	9.97
1977	6.79	5.32	4.72	3.73	.34	.27	11.80	9.32
1978*	5.73	4.98	4.36	3.79	.29	.25	10.38	9.03

*Estimate

Notes: (a) Relates to total net receipts of exchequer as shown in *Annual Reports of Revenue Commissioners*

(b) Relates to total taxes on capital, income, wealth, and expenditure including social insurance contributions and rates as shown in *National Income and Expenditure*

Table 11: *Employment in production and retail distribution of alcoholic beverages, Ireland, 1951-71*

Manufacturing alcoholic beverages[1]	*Retail sale of alcoholic beverages*		*Total*	*Total as per cent of total Employment*
	Public house	*Grocery and public house combined*		
	(Thousands)			
1951 7.0	14.4	4.5	25.9	2.1
1961 6.4	10.9	6.2	23.5	2.2
1971 5.9[2]	12.0	3.2	21.1	2.1

[1] Malting, brewing, distilling

[2] Census of Industrial Production data, average of 1970 and 1971 October figures (1971 Census of Population aggregated entire "beverages" group).

Source: *Census of Population.* Industries Volume
Irish Statistical Bulletin, for 1971 Manufacturing Employment.

specific to the industry and would only be redeployed in other sectors at a considerable cost, Ireland does not share with, for example, the wine producing regions of Europe a high regional dependence on producing alcohol from agricultural inputs grown on land that has very low productivity in alternative uses, but our endemic high unemployment rate lends force to the argument that it would be difficult to replace the jobs lost in any major contraction of the alcohol trade.

A final measure of the importance of alcohol in the Irish economy is provided by considering the proportion of total exports accounted for by alcoholic beverages. In the early years of the independence of this state alcoholic beverages accounted for a very large proportion of non-agricultural exports. In 1928 out of a total export trade of £45 million just over £4 million was due to exports of "ale, beer, porter and spirits", and other non-agricultural items only amounted to £5 million (Commission on Emigration, 1948/54, Table 36). The data in Table 12 show how radically this situation had changed by the

Table 12: *Irish Trade in Alcoholic Beverages (1961–78)*

	Beer		*Spirits*		*Wine*		*Total alcoholic beverages*			
	Imports £m.	*Exports £m.*	*Imports £m.*	*Exports £m.*	*Imports £m.*	*Exports £m.*	*Imports £m.*	*Exports £m*	*Imports of alcoholic beverages as per cent of total merchandise imports*	*Exports of alcoholic beverages as per cent of total merchandise exports*
1961	0.3	6.9	1.2	0.4	0.8	0.02	2.3	7.32	0.88	4.1
1962	0.4	6.7	1.4	0.5	0.9	0.02	2.7	7.22	0.99	4.1
1963	0.6	6.9	1.6	0.5	0.9	0.02	3.1	7.42	1.01	3.8
1964	0.6	6.9	1.5	0.6	1.1	0.02	3.2	7.52	0.92	3.4
1965	0.5	7.0	1.8	0.6	1.2	0.03	3.5	7.63	0.94	3.4
1966	0.6	7.5	1.5	0.6	1.0	0.03	3.1	8.13	0.83	3.3
1967	0.5	7.9	1.5	0.7	1.2	0.02	3.2	8.62	0.82	3.0
1968	0.4	8.2	2.0	1.0	1.5	0.02	3.9	9.22	0.79	2.8
1969	0.4	8.0	2.2	1.0	1.6	0.02	4.2	9.02	0.71	2.4
1970	0.4	8.4	2.4	1.4	1.8	0.04	4.6	9.84	0.68	2.1
1971	0.4	9.6	2.5	1.6	1.8	0.03	4.7	11.23	0.62	2.1
1972	0.6	10.2	3.8	1.9	2.4	0.03	6.8	12.13	0.81	1.9
1973	0.6	11.0	5.1	3.1	4.4	0.08	10.1	14.18	0.89	1.6
1974	0.7	10.5	5.5	3.5	3.8	0.06	10.0	14.06	0.62	1.2
1975	0.6	14.2	6.7	3.8	4.6	0.04	11.9	18.04	0.70	1.3
1976	0.7	14.9	8.0	5.9	6.1	0.03	14.8	20.83	0.63	1.1
1977	0.9	15.1	9.0	9.6	7.7	0.05	17.6	24.75	0.57	1.0
1978	1.0	16.0	13.5	17.1	9.7	0.02	24.2	33.12	0.65	1.1

Source: Irish Trade Statistics

1960s and how this trend continued during the 1970s. The value of exports of alcoholic beverages grew four-fold between 1961 and 1978, but total exports grew more than ten-fold, so that the share of alcoholic beverages in total exports declined from four per cent in 1961 to one per cent in 1978. More detailed examination of the trade statistics reveals that exports of spirits have grown from a very small base in 1961 to the point where they accounted for more than half of total exports of alcoholic beverages in 1978. Until 1977 we ran a net deficit in our trade in spirits, but Irish whiskey sales abroad now account for almost half of total sales of Irish whiskey, and the distillers look to overseas markets for much of their future growth. Beer exports, on the other hand, have consistently made a sizeable net contribution to foreign exchange earnings.

In summary, then, the relative importance of the alcoholic beverages industry in the Irish economy has been declining by all the measures considered here – contribution to tax revenues, employment, and foreign exchange earnings. Nevertheless, the exchequer remains very heavily dependent on the excise taxation of alcohol as a source of revenue, exports of spirits have grown rapidly in recent years, and beer remains an important source of net foreign exchange earnings.

Section 6

Assessing the Economic Costs of Alcohol Abuse and their Relevance to Control Policies

Cost-benefit studies are properly undertaken by economists to evaluate and compare alternative uses of scarce resources – the most obvious example being a comparison between several proposed road construction projects in order to decide which should be undertaken first. There is no comparable basis on which a cost-benefit evaluation of alcohol could be conducted. Despite this, there is a tradition of attempting to place a money figure on the economic costs of alcohol abuse (see Berry and Boland, 1977).

This type of calculation is not a simple matter and may not be very meaningful. There is no general agreement as to what should be included among the costs of alcohol abuse, and the imputation of money figures for most of the items to be included involves a high degree of subjective guess work. The problems encountered in this area are particularly severe in Ireland because there have been no detailed studies of individual aspects of the effects of excessive drinking. In other countries, these topics have received much more attention, but an examination of the methods used reveals to my mind a tendency to attribute to drinking a causal role in many areas where it may be no more than a symptom of a deeper problem. To give an example, the mere fact that a high percentage of cases of assault involve people who have been drinking does not necessarily imply that all these incidents would be averted if the people in question did not drink.

In this section, some of the methodological issues involved in measuring the economic costs of alcohol abuse are briefly

discussed. Appendix A contains some very tentative calculations for Ireland based on the principles discussed here. These estimates of the economic costs of alcoholic abuse are related to the revenue received from taxes on drink, and the balance between costs and tax receipts discussed.

The first point to bear in mind in any attempt to measure the economic costs of excessive drinking is that the concept most relevant to social policy is the cost imposed on others by heavy drinkers. There seems to be little point in including any allowance for the costs that are borne by the drinker himself in the form of decreased earnings, increased pain and illness, and perhaps premature death. As Mishan (1972, p. 164) explains in another context:

> If smoking tobacco causes 20,000 deaths a year, no subtracting from the benefits, on account of this risk, need be entered in a cost-benefit analysis of the tobacco industry in as much as smokers are already aware that the tabacco habit is unhealthy . . . the economist has no choice but to assume that they consider themselves better off despite the risks.

One ground for rejecting this argument would be the "addictive" nature of alcohol, which implies that after a certain stage the drinker can no longer be considered to choose freely to go on drinking. To the extent that a person can arrive at this stage unwittingly, conventional economic analysis of consumer behaviour, with its assumption of rational choice each time a consumption decision is made, is irrelevant. But whether it is useful to view alcohol as an addictive in the sense that once a certain threshold is passed the individual no longer retains any control over decisions about future levels of drinking is debatable, and it certainly can be argued that few drinkers remain unaware of the risks of becoming "addicted" through persistent heavy drinking.

Another agrument against Mishan's view is based on a rejection of his (and most economists') implicit assumption that individuals are fully informed about the consequences of their consumption patterns and really are capable of making informed decisions leading to a utility maximising pattern of

consumption. A more sceptical view of the knowledge available to consumers, and a less optimistic view of the wisdom of their behaviour, is widespread among non-economists and accounts for the very widespread use of subsidies to encourage consumption of "merit" goods (e.g., education) and taxes to discourage "demerit" goods (e.g., alcohol). While acknowledging the wide acceptance of this argument, it is implicitly rejected in the approach to evaluating the economic costs of alcohol abuse taken in the present study.

There is an obvious analogy with suicide in some drinking patterns. The excess mortality associated with heavy drinking has been documented by Sundby (1967) and Adelstein and White (1976), among others. It is particularly interesting to note the importance of the high rate of suicide among heavy drinkers. While to some extent this may reflect the misery induced by addiction to alcohol, it might also indicate that heavy drinking is a form of suicide. More generally, we all know that we could prolong life by rigorous adherence to strict rules of diet, exercise and other habits, but we make some sort of implicit calculation as to how much extra longevity we are willing to secure in this manner, and more or less consciously decide to sacrifice the additional years of life that could be attained by a more austere lifestyle or additional expenditure on health. It is also relevant to note that exposing life to avoidable risks may be enjoyable to some, especially younger people. As Fromm (1968) argues this is shown by observing human behaviour in such activities as racing fast cars. On balance, then, it seems that we should accept Mishan's line of reasoning, and enter no debit to the alcohol industry simply because some heavy drinkers die younger.

Another major problem in evaluating the costs of heavy drinking is the question of evaluating the pain and suffering to others caused by a heavy drinker's behaviour, including perhaps his premature death. Undoubtedly, this is enormous and, in commonsense terms, constitutes perhaps the main cost of alcohol abuse. But there is no agreed methodology by which

this can be converted into a money equivalent. Hypothetical amounts, such as the sum that others would be willing to pay to avert the problem, could be discussed, but there is no possibility of actually measuring these. In an analogous area, the evaluation of the costs of road traffic accidents, it is customary to omit any imputation for the pain and suffering caused to others by an accident victim's death. There seems to be no choice but to adopt the same approach in respect of alcohol abuse. This may strike some as omitting the most important damage done by heavy drinking from our calculations, but it underlines the limitations of an economic approach in this area. The traditional "temperance" attitude to heavy drinking was to condemn it on moral grounds rather than to attempt to demonstrate the damage it inflicted on the economy, and the points raised here suggest that the more recent emphasis on the economic repercussions of heavy drinking has a limited relevance.

The output that an alcoholic might have produced had he lived longer is not a cost to society unless (which is unlikely) the alcoholic was being paid less than the value of his contribution to national income. The usual assumption is that he would have been paid the value of the output he produced, so the rest of society neither gains nor loses if he does not produce this output and receive this income. Moreover, in an economy which has a high unemployment rate and a rapidly growing labour force, a worker who dies prematurely can generally be easily replaced unless he has skills that are not readily available. To take an extreme example that may not be wholly without relevance in the Irish context: an alcoholic bachelor who lives alone on a small farm and dies prematurely (from pneumonia, for example) because of a combination of heavy drinking and neglect of his health can hardly be said to impose economic costs on society. However tragic his life and death are, no one other than himself is economically worse off because of his death. It would be fallacious, in my view, to treat as a cost of alcohol abuse the present value of the output he might have

produced had he lived longer. In fact, there may even be an economic gain to others in the freeing of land he no longer mismanages. Similarly, if he were killed by running his own car into a lamp post, no cost is imposed on society.

The items that should be included in a list of the economic costs of alcohol abuse to society are the damage done to others through motor vehicle and other accidents caused by drinking; some measure of the effect of alcoholism on costs of production, the cost of state-financed health care facilities used to treat alcoholism or illness caused by heavy drinking, resources (police, social workers etc.) used to cope with the problems created by heavy drinking, and finally transfer payments (pensions, unemployment benefits etc.) paid to drinkers or their dependents because of absence from work or death caused by drinking. The first four items are resource costs of alcohol abuse, the last item is a transfer payment which could be regarded as a subsidy to the drinker from the rest of society, but does not lower the overall level of national production.[4] The state has to raise revenue to meet some of the resource costs (such as the health care costs) and the transfer payments but some of them (such as damage caused by accidents) are borne by non-drinkers or moderate drinkers in the form of higher insurance premiums.[5]

Much of the basic information that is required to arrive at reliable estimates of these costs is simply unavailable for Ireland. Only by making assumptions based on shreds of evidence and figures that have been used in other countries can any progress towards an estimate be made. This is done, item by item, in Appendix A, using figures for 1976 because this is the latest year for which national income accounts are available at the time of writing.

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[4] Taxes imposed to finance transfer payments have a resource cost to the extent that they cause market distortions.

[5] An interesting development in this context is the recent announcement by the largest Irish car insurance company of a discount (in the form of immediate entitlement to the first year's no claims bonus) for non-drinkers. This should be welcomed as a rough attempt to make the drinking driver bear more of the cost of the increased risk of accidents associated with drinking.

The results of this tentative exercise suggest a figure in the region of £63 million as the 1976 cost to the exchequer of health care and social service expenditure, unemployment benefits, pensions etc., and loss of tax revenue due to alcohol abuse. This must be viewed against the tax revenue contributed by drinkers. In 1976, the yield of excise taxation of alcohol in Ireland totalled £158 million[6], in addition to which value added taxation (VAT) of the sale of alcohol brought in £34 million, and excise licences for selling liquor a further £0.1 million. Thus the total tax yield associated with alcohol was £192 million. But it would be fallacious to attribute *all* this tax yield to alcohol in as much as a switch of consumer outlays from alcohol to other items would not result in a net tax loss of £192 million – most of the items whose consumption would rise are also subject to VAT and excise taxation. A net loss to the exchequer would occur only because alcohol is an exceptionally heavily taxed item and any reduction in expenditure on it will involve a switch to less heavily taxed items (unless all the expenditure were diverted to tobacco or petrol – items with an even higher rate of excise taxation). As a simple way of approximating how much indirect tax would be recouped by the exchequer if consumers diverted *all* their present outlay on alcohol to other items, I have assumed that this diverted expenditure would be subject to a tax rate equal to that in effect on non-alcoholic expenditure as a whole in 1976. Thus the increased expenditure on non-alcohol would yield £73 million in excise tax and VAT, compared with the £192 million received from alcohol. This allows us to conclude that the "net" tax yield of the expenditure on alcohol is £119 million. This is a measure of the extent to which the tax on alcohol is exceptional by comparison with that on other items of expenditure.

A further consideration needs to be mentioned, even if we can do little to quantify it. If drinkers were persuaded to switch

[6] Excise tax receipts are not "earmarked" for any specific use in Ireland, but form part of general Government revenue. They thus help finance current Government expenditure.

a significant amount of their expenditure from alcohol to other items of consumption, the gain in terms of the reduction in alcohol-related problems might be partially offset by some increase in other public health problems. This would be most obvious if the switch were into tobacco products, but econometric studies suggest a low marginal expenditure elasticity for this commodity (McCarthy, 1977). However, increased expenditure on motor vehicles and travel (which have high marginal expenditure elasticities) would lead to an increase in road accidents. Thus we must bear in mind that although a substantial reduction in alcohol consumption would undoubtedly reduce the level of alcohol-related problems, some of this gain might be offset by a rise in other problems due to the increased amount of money available for other items of expenditure.

Taking a summary view (ignoring the considerations just discussed), we could very tentatively say that the cost to the exchequer of alcohol abuse in Ireland in 1976 was in the region of £60 million, compared with a "net" tax yield of £119 million. I think the margin by which the net tax yield exceeds the estimated cost is sufficiently large to allow us to conclude that alcohol consumption considered from the aggregrate viewpoint does not impose a net cost on the state.[7] Drinkers are so exceptionally heavily taxed that they more than pay for any costs their drinking imposes on other taxpayers.

The implications of this analysis must be interpreted carefully. The findings suggest that *in the aggregate* the Irish drinker more than "pays his way", but this should not lead us to ignore the likelihood that individual heavy drinkers impose substantial net costs on society. We all stand to gain enormously, in hard cash as well as in a wider sense, if the damage inflicted on society by excessive drinkers is averted. The main obstacle in the way of reaping this potential gain is the fact

[7] It would be wrong to go as far as the nineteenth century British MP who asserted that the habitual drunkard was "the Sheet Anchor of the British Constitution" because of the amount he paid in taxes (Harrison, 1971, p. 347)!

that many of the measures that have been proposed to achieve this goal, such as controls on availability of alcohol and higher excise taxation, affect *all* drinkers and not only the minority who account for the bulk of the damage caused by alcohol abuse. A question has to be raised as to the fairness and political feasibility of interfering with the liberty of a large group in society in the hope of modifying the behaviour of a minority within that group. An analogy could be drawn with motor vehicle insurance, where the premia are set to cover the aggregate cost of the claims plus the insurance companies' profit margin. If these premia were so high that they covered that cost of claims twice over, motorists would strongly resist any increases which were based on the belief that higher premia would discourage driving in general and thereby bring down the accident rate among a minority of reckless drivers. Although originally simply a revenue raising measure, the high excise taxes on alcohol could be viewed as a premium paid by drinkers in general to offset the costs imposed on society by excessive drinking, and since I estimate that this premium is more than adequate to cover these costs in Ireland, one can understand the reluctance of politicians to espouse higher rates of taxation as a means of controlling the adverse side-effects of alcohol consumption. Moderate drinkers might argue that penalties should be borne by the bad risks (that is, the heavy drinkers) rather than by the moderate drinker almost as much as the real offender. Unfortunately, there is no readily apparent way in which excise taxes could be restructured to meet this objection.

These issues are important because expert opinion appears to be moving away from the view, which gained ground during the 1960s, that alcoholism is a disease amenable to medical treatment, towards the belief that alcohol-related problems should be seen in a wider social context and that the best hope of curbing these problems lies in measures that reduce the availability of drink and moderate the overall level of drinking in society (see Bruun *et al.*, 1975; Robinson, 1977; Kendall,

1979). This emerging emphasis on social control as the most promising approach to the problem of alcohol abuse raises the important question whether the state is justified in interfering with the liberty of the public to the extent that would be necessary to achieve a general reduction in the level of alcohol consumption. An affirmative answer to this question is only warranted if it can be shown that this approach would achieve a major reduction in the social costs of alcohol abuse. Unfortunately, relatively little is known about the effectiveness in reducing average consumption of many of the widely proposed measures, such as curbs on advertising, higher excise taxation, and stricter controls on availability. Moreover, it is not certain that the drinkers who would be discouraged by such measures (as distinct from total prohibition or the emergency conditions imposed during war time) are those who account for a significant proportion of the social problems of alcohol abuse. These issues are returned to in Section 8, below.

Section 7

The Trend of Alcohol Prices and Taxation

The price of alcoholic beverages is obviously of great importance in any discussion of policy towards alcohol. The Irish situation is exceptional because of the very heavy burden of excise taxation borne by beer and spirits. It is not easy to make international price comparisons of a bundle of commodities such as alcoholic beverages relative to the general price level. However, the most authoritative study of international price levels (Kravis *et al.*, 1978) shows that beer, wine, and spirits are very expensive in the United Kingdom compared with other EEC countries or the United States.[8] In as far as the relative price of alcohol in Ireland appears to be slightly higher than that in the United Kingdom, it may safely be concluded that alcohol is relatively a very expensive item in this country.

It is much easier to make comparisons of the trend in the real price of alcoholic drink within Ireland over time than to present international price comparisons. Table 13 and Chart 2 show the trend in the "alcoholic drink" component of the Consumer Price Index relative to the total consumer price index since 1961. The real price of alcoholic drink rose quite significantly between 1961 and 1969, but declined between 1970 and 1974. The fluctuations in this price since 1970

[8] See Kravis *et al* Appendix Table 4.3, taking the ratio of a country's purchasing power parity for alcoholic beverages to its overall purchasing power parity as a measure of the relative price of the beverage. "Purchasing power parity" is the number of units of one currency needed to buy goods equivalent to what can be bought with one unit of another currency. If, for example, $1 will buy a bottle of beer in the United States and the same bottle cost £0.50 in Ireland, the US/Irish beer purchasing power parity is 2.

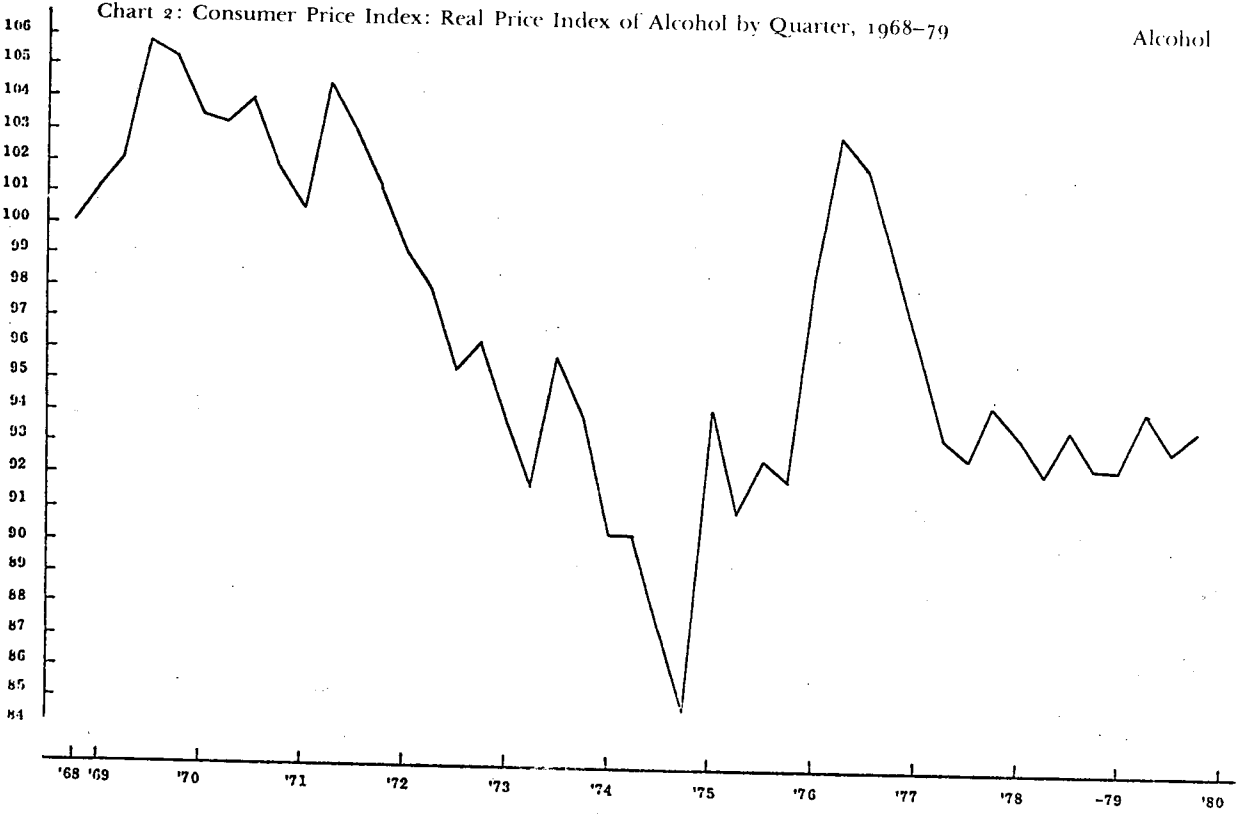
Table 13: *Real price of alcoholic beverages, 1961–80*

	(Annual average 1970 = 100)		
	Alcoholic drink (1)	*Beer* (2)	*Spirits* (3)
1961	82.4	73.6	94.1
1962	89.5	81.5	99.0
1963	90.2	82.6	99.1
1964	92.1	85.4	98.2
1965	92.4	86.3	98.3
1966	95.2	89.2	102.5
1967	96.9	92.0	103.2
1968	96.2	93.9	100.8
1969	100.4	101.8	102.7
1970	100.0	100.0	100.0
1971	99.1	99.5	99.1
1972	94.3	93.1	93.2
1973	91.0	86.9	90.6
1974	85.5	78.3	80.9
1975	89.6	89.3	88.0
1976	97.6	103.4	89.7
1977	91.3	97.8	85.2
1978	90.2	97.7	83.7
1979	90.5	95.0	86.0
1980 (first two quarters)	93.5	98.0	90.0

Notes: Series (1) is the index of alcoholic drink in the Consumer Price Index divided by the all items index. Prior to 1968 the implicit deflators of expenditure on GNP were used.

Series (2) and (3) are based on indices of the retail price of a pint of stout and a glass of whiskey in the Dublin area, divided by the Consumer Price Index. These are not official price indices, but they give a reliable indication of the trend in beer and spirits prices over the years.

Chart 2: Consumer Price Index: Real Price Index of Alcohol by Quarter, 1968–79



illustrate the effect of inflation on the tax component in the price, and the sudden adjustment of the tax in the Budgets of 1975, 1979 and 1980.

Table 13 also contains an approximate index of beer and spirits prices, which illustrates the tendency for beer to become expensive relative to spirits over the period since 1961. This change in relative prices is frequently mentioned as a reason for the more rapid growth of spirits consumption, although it has proved difficult to support this through econometric studies, which seem to suggest that the two beverages are, if anything, complementary rather than substitutes (Kennedy *et al.* 1973). It may be seen that the tax increases introduced in the 1980 Budget restored the relative prices of the two beverages to their 1970 levels.

The prices displayed in Table 13 reflect the costs of producing and selling alcoholic beverages as well as the taxation levied on them. From a policy viewpoint interest lies mainly in the tax element. The excise on beer is levied as so many £ per standard barrel (that is, 36 Imperial gallons of worts at a specific gravity of 1055°), and on spirits as so many £ per proof gallon spirits (that is, an Imperial gallon which at 51° Farenheit weighs 12/13th of an equal measure of distilled water at the same temperature). In Table 14 and Chart 3 the level of these excise taxes over the period 1950-80 is shown in current and in constant (1968) prices. These series are accurate measures of the excise tax borne by beer and spirits, although changes in the alcoholic strength of the final product should also be taken into account.[9] In 1961 a standard barrel of Irish-produced beer was made into 1.18 barrels of the final product, but by 1976 the same standard barrel would have yielded 1.38 barrels of the weaker beer being sold then. The average specific gravity of beer retained for consumption in Ireland declined from 1042.1° to 1039.8° over the period, and apparently a similar reduction occurred in the alcoholic strength of spirits.

[9] There is no requirement that alcoholic beverages sold in Ireland display information on alcoholic content.

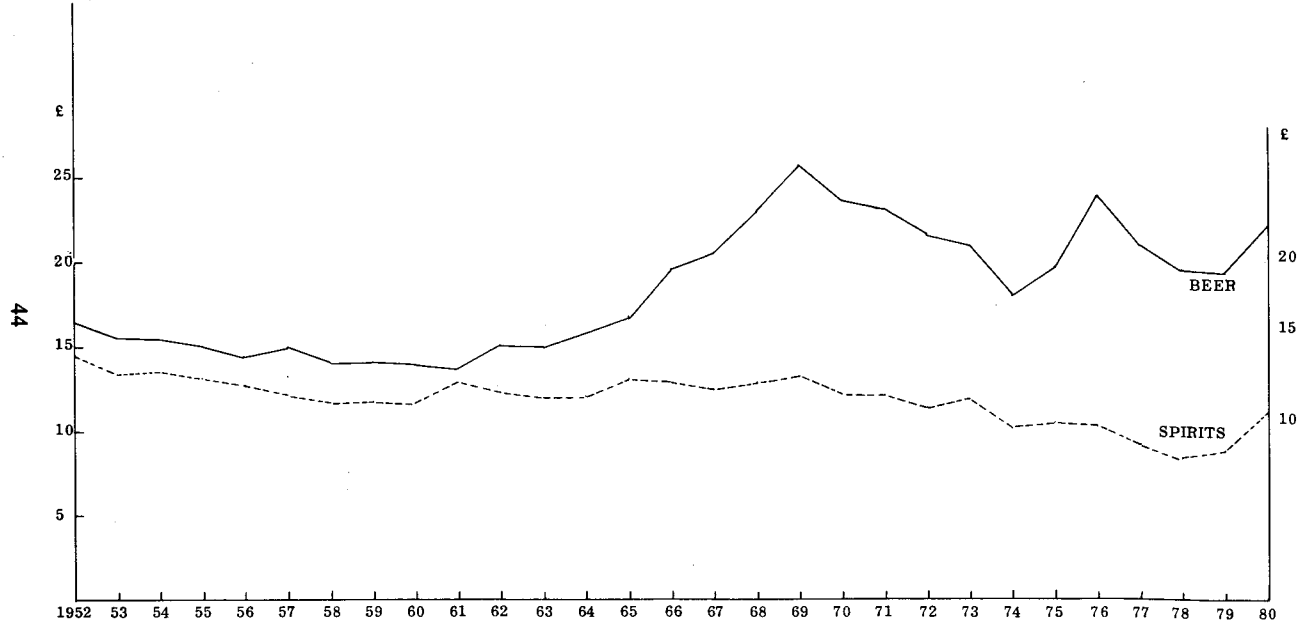
Table 14: *Excise duty on beer and spirits in current and constant prices, 1950-80.*

	Current prices		*Constant (1968) prices*	
	Beer £/Standard Barrel	*Spirits £/Proof Gallon*	*Beer £/Standard Barrel*	*Spirits £/Proof Gallon*
1950/51	5.60	6.85	11.26	13.77
1951/52	5.60	6.85	10.43	12.76
1952/53	9.65	8.40	16.53	14.40
1953/54	9.65	8.40	15.71	13.67
1954/55	9.625	8.40	15.64	13.64
1955/56	9.625	8.40	15.27	13.33
1956/57	9.625	8.40	14.61	12.76
1957/58	10.275	8.40	14.96	12.23
1958/59	10.275	8.40	14.34	11.73
1959/60	10.275	8.40	14.34	11.73
1960/61	10.275	8.40	14.29	11.68
1961/62	10.275	9,56	13.89	12.92
1962/63	11.825	9.56	15.35	12.41
1963/64	11.825	9.56	14.96	12.10
1964/65	13.335	10.295	15.84	12.23
1965/66	14.85	11.775	16.78	13.31
1966/67	17.97	11.775	19.73	12.93
1967/68	19.335	11.775	20.57	12.53
1968/69	22.81	12.515	23.18	12.72
1969/70	27.09	13.985	25.63	13.23
1970/71	27.09	14.02	23.68	12.26
1971/72	29.167	15.385	23.40	12.34
1972/73	29.167	15.385	21.54	11.36
1973/74	31.913	17.990	21.16	11.93
1974 (9 months)	31.913	17.990	18.09	10.20
1975	52.047	22.272	19.72	10.45
1976	60.595	26.0376	24.08	10.35
1977	60.595	26.0376	21.19	9.11
1978	60.595	26.0376	19.69	8.46
1979	67.976	31.0246	19.50	8.90
1980*	90.12	44.33	21.9	10.8

*Constant price figures assume 18 per cent increase in Consumer Price Index during 1980.

Sources: Annual Reports of Revenue Commissioners.
Finance Acts.

Chart 3. Excise Duty on Beer (standard level) and Spirits (proof gallon) in 1968 Prices



Manufacturers are given an incentive to reduce the strength of alcoholic beverages by the fact that the excise tax is levied on the standard barrel or proof gallon, regardless of the volume of the final product obtained from these measures, but changing consumer preferences have been important as a reason for the reduced average strength of the beer and spirits being sold today. The consumption of vodka has risen rapidly, and this in particular has reduced the strength of the spirits group as a whole.

The most striking feature of the trend in the tax element in both beer and spirits is that the real (or constant price) tax on beer in 1979 was no higher than it was in 1967, while that on spirits was 22 per cent below its 1961 level. It is very evident from these tables that the Government's ability or willingness to maintain the real tax rate on drink declined during the period of accelerated inflation starting in the early 1970s. This is perhaps inevitable in view of the political unpopularity of annual budget excise tax increases large enough to offset a rapid rate of inflation, as well as the way excise tax increases are themselves reflected in subsequent consumer price increases. The tax increases on beer and spirits announced in 1976 and 1980, were widely seen as austerity measures, but the figures in Table 14 show that they merely restored the level of real taxation that prevailed in the early 1970s.

Another striking aspect of the development of drink taxation since 1961 is the very significant increase in the tax on beer relative to that on spirits. In 1961, the tax on a proof gallon spirits was 85 per cent of that on a standard barrel of beer, but in 1978 it had fallen to 44 per cent. Total tax revenue obtained from spirits in the early 1960s was a little less than that obtained from beer, but by 1976 beer was contributing almost 50 per cent more to the exchequer than spirits, despite the more rapid growth in spirits' consumption. On the other hand, if the excise tax on beer, spirits and wine is regarded as a tax on the alcoholic content of these beverages, it can be calculated that spirits are more heavily taxed than beer:

Excise tax per litre of alcohol content

£

	1980	*1961*	*1961 at 1980 prices*
Spirits	17.1	3.36	18.8
Beer	11.5	1.30	7.3
Wine*	9.5	1.36	7.6

*Assuming 11.5 per cent alcohol by volume

The alcohol in spirits is more heavily taxed than that in beer or wine in all EEC countries (Sulkunen, 1978, Table 3). This may be the result of a belief that strong drinks are more harmful than beer or wine – a point of view for which there is some evidence (Brown, 1978). It is more likely, however, that the high rate of tax on spirits is due to the desire to obtain a high revenue yield and a reluctance to tax beer too heavily in view of its importance in the working man's budget. The differential between beer and spirits excise taxes has narrowed appreciably since 1961, but recent budget changes have reversed this trend.

Section 8

Reflections on Control Policy Options

The rapid increase in alcohol consumption of the past two decades gives grounds for apprehension about the future scale of alcohol abuse problems. We have already mentioned the growing support for the view that the most promising approach to the problem of excessive drinking in a society is to try to reduce the overall level of alcohol consumption. Among the measures frequently proposed to achieve this goal are increased excise taxation of alcohol, stricter curbs on advertising of alcoholic beverages, and campaigns to educate the public about the dangers of heavy drinking. In the present section some thoughts on the possible effectiveness of these approaches in Ireland are presented against the background of the information in the previous sections.

8.1: *Price as a Control Mechanism*

It was seen in Section 7 that drink is relatively expensive in Ireland, in the sense that a larger amount of other commodities must be forgone in order to purchase a given quantity of beer or spirits than is the case in other countries for which data are available. This is largely due to the heavy excise taxation of drink in Ireland. It was also seen that up to the 1980 Budget the burden on excise taxation on spirits and wine has not tended to keep pace with inflation, but that on beer has risen considerably in real terms since 1961.

When consumers respond to an increase in a commodity's price by a less than proportionate fall in the amount consumed,

economists say that the demand for the commodity is price inelastic. (In Appendix C some of the basic relationships between price, quantity, and expenditure are summarised.) All the available evidence (see Appendix B) suggest that the price elasticity of demand for alcoholic beverages in Ireland is low. This reflects the fact that drinkers are not easily persuaded by price rises to reduce their cosumption – whatever needs are being satisfied by drinking are not readily met by other means. The evidence also suggests that the Irish allocate a substantial amount of any increase in their incomes to buying drink (see Appendix B). The result of this low price elasticity and high income elasticity is that although our *per capita* consumption is still modest by international standards (see Table 2) it is high by comparison with what might be expected in view of the fairly low average income in Ireland and the high relative price of alcoholic beverages.[10]

What results could be expected from a policy of increasing excise taxes on drink so as to maintain a steady rate of increase in its price relative to the general cost of living, as is advocated by some who wish to curb the growth in alcohol consumption? Using estimates of price and income elasticities discussed in Appendix B, Table 15 presents the results of an exercise in simulating demand under a number of assumptions about prices and incomes.

Assuming a price elasticity of – 0.4 and income elasticity of 1.2, the growth of *per capita* consumption under two assumptions about the behaviour of prices and incomes is illustrated. The first assumption is that the real price of drink

[10] This conclusion is supported by the results presented in Kravis *et al.*, where real quantities *per capita* are regressed on relative prices and real income in the 16 countries included in the study. Quite high and statistically significant income elasticities and negative but insignificant price elasticities were obtained for both beer and spirits (see Table 6.4). In the light of this finding it is hard to explain in conventional economic terms why Irish *per capita* consumption of alcohol should be about equal to that in the UK, where real income is about 50 per cent higher than in Ireland. The high consumption of drink in Ireland appears to be an exception to the general tenor of the analysis in Kravis *et al.* that differences in consumption patterns between countries can be accounted for by differences in prices and income without recourse to social or cultural explanations.

Table 15: *Illustrations of likely growth in drink consumption and expenditure over a five-year period*

	Annual average growth rate of real income			
	3 per cent		*5 per cent*	
	Real price of drink static	*Real price of drink rising by 5 per cent p.a.*	*Real price of drink static*	*Real price of drink rising by 5 per cent p.a.*
Initial Year Consumption	100	100	100	100
Consumption Year 5	119	108	133	122
Initial Real Expenditure	100	100	100	100
Real expenditure in year 5	119	138	134	156

Assumptions: Price elasticity = − 0.4
Income elasticity = 1.2
Both elasticities constant over the range of income and prices considered.

remains at its present level, which is also close to its average level during the 1970s. Alternatively, the real price is assumed to grow at five per cent annually. Real *per capita* income is assumed to grow at three per cent annually (close to the historical trend growth rate) or five per cent.

Combining this range of assumptions we see that drink consumption per person grows by a minimum of eight per cent or a maximum of 33 per cent over a five-year period. Examination of the results reveals very clearly that slowing down the growth of the economy from five to three per cent would have a greater impact on consumption than would increasing the real price by 28 per cent over a five-year period. The slower growth in income results in a level of consumption about 14 per cent lower than it would otherwise be, whereas the increase in the real price only causes consumption to be 11 per cent below what it would be if the price remained stable.

Unfortunately, the modest curb on consumption that results from a major rise in the real price of drink is accompanied by a substantial increase in real expenditure on drink. In all four cases the amount spent on drink rises more rapidly than income, but this discrepancy is most pronounced when the real price of drink rises, causing the growth rate of expenditure on drink to be almost double that of real income. Increasing drink prices at this rate would also add about three per cent to the cost of living.

In as much as some of the problems associated with heavy drinking in Ireland arise from excessive expenditure on drink – leaving too little for other purposes – I would be slow to conclude that a policy of long-term increases in the real price of drink would be socially desirable. Before judging this issue one would like to know more about which drinkers are deterred by price increases. We have no direct information on this, but the econometric evidence discussed in Appendix B shows that the lowest price elasticity is associated with beer (and within the beer group with stout, traditionally the working man's drink), while spirits appear to be more price sensitive. If this is the case,

increases in the price of spirits would have a greater deterrent effect on consumption, and run less risk of pushing up the proportion of income devoted to buying drink, than similar increases in beer prices. But reliance on price increases as a deterrent to heavy drinking is open to the general criticism that perhaps only moderate drinkers are deterred by higher prices, while heavy drinkers respond to higher prices by devoting more of their income to maintain their drinking habits.

The only available official information patterns of expenditure on drink comes from the results of the Household Budget Inquiry. Although these results seriously understate total expenditure on drink, they may provide useful information on variations in the pattern of expenditure by social groups and income classes. From Table 16 it may be seen that there is a fairly clear tendency for the proportion of total expenditure devoted to alcohol among the lower social groups to exceed that among the professional and salaried classes. This is wholly due to high proportion of expenditure devoted to beer among the "other non-manual", "skilled manual", and "semi-skilled manual" workers. This "regressive" pattern of expenditure is much less pronounced when the data for income groups are studied, possibly because many of the lowest income households consist of one (elderly) adult, and this type of household tends to devote only a small proportion of total expenditure to alcohol. These figures, although they must be treated with caution, illustrate the intractable problems in the way of designing an alcohol taxation policy that would penalise heavy drinkers while avoiding undesirable effects on the distribution of income.

Concern that the effects of price increases could lead to a rise in the proportion of income devoted to drink could be allayed by the consideration that if this occurred it would be reflected in the growth of tax revenues from drink. This buoyancy in excise tax receipts could, in theory at least, be earmarked for offsetting any adverse effects of the higher expenditure on drink through, for example, a programme of food subsidies.

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Table 16: *Reported expenditure on alcoholic beverages as percentage of total household expenditure (urban areas), 1977*

Social group	*Beer*	*Spirits*	*Wine*	*Drink undefined*	*Total alcohol*
Professional	1.6	0.8	0.6	0.7	3.7
Salaried employees	2.8	0.7	0.3	0.9	4.7
Other non-manual	5.1	0.7	0.1	0.7	6.6
Skilled manual	5.6	0.7	0.1	0.5	6.9
Semi- and unskilled manual	6.1	0.6	0.0	0.6	7.4
Other	3.3	0.4	0.2	0.5	4.4
All households	3.8	0.7	0.3	0.7	5.5

Gross weekly household income	*Total alcohol**
Under £20	2.7
£20 – £29	4.9
£30 – £39	4.8
£40 – £49	5.3
£50 – £59	6.1
£60 – 69	4.9
£70 – £79	5.2
£80 – £89	5.2
£90 – £99	4.7
£100 – £119	5.7
£120 – £149	5.7
£150 – £179	5.2
£180+	6.2
All Households	5.5

* Data for individual beverages not published.

Source: Household Budget Survey, Annual Urban Inquiry, Results for 1977

special interventions to help the families of heavy drinkers. Subsidies on essentials financed from the additional receipts from taxes on drink could in theory be used to offset the inflationary consequences of the higher taxes. In reality it

would prove very difficult to ensure that Ministers for Finance at some future date would not succumb to the temptation to use the money for other pressing requirements.

The necessity for annual announcements of higher rates of excise taxation, and the political obloquy they entail, could be removed if the system of taxing alcoholic beverages were changed to a VAT basis. A step in this direction has been taken as far as tobacco is concerned. In 1978 the system of taxation on tobacco was changed so that it is now partially an *ad valorem* tax. A disadvantage of this change is the requirement that about one per cent of VAT receipts must be considered part of the EEC's "own resources".

In summary, then, there are major limitations on the scope for using the tax on drink as a control mechanism in Ireland. This tax is already very high, which is partly why the proportion of income devoted to drink is higher in Ireland than anywhere else in the world. Moreover, there is some tendency for the poor to devote a higher proportion of their income to purchasing drink than do other groups, and care would have to be taken to avoid exacerbating this pattern of expenditure through increased taxation. Finally, it is hard to structure a pricing policy so that it has its greatest effect on the heavy drinkers who constitute the core of the problem of alcohol abuse. While it might be argued that some of these objections could be met by a policy of raising the price of spirits and wine relative to beer, it must be admitted that this is at best a crude approach to dealing with the issues involved.

Ultimately, the greatest obstacle in the way of using excise taxation as a means of moderating the growth of drinking is the political unpopularity of increases in the cost of living due to higher taxes on beer and spirits. Successive governments have shown concern at any factor that contributes to the rate of inflation and the National Prices Commission, for example, subjects applications for higher drink prices by the producers or retailers to detailed examination and tries to minimise the actual price rise. In the consultants' study of the brewing

industry published by the Commission in February 1979, the main emphasis was on the scope of increased efficiency and cost reduction in the industry, presumably in the hope that such measures could provide grounds for price reductions. This illustrates the conflict between policies that may seem desirable from the public health viewpoint, such as increased excise taxation of drink, and those that are pursued with the aim of moderating the rate of inflation.[11]

Few countries have experimented with excise taxation on drink as a means of controlling the spread of alcohol abuse. In the United Kingdom, the taxes on drink were increased steeply as part of a number of special measures during the First World War. These measures certainly resulted in a sharp fall in the amount of drink and in the level of alcohol-related problems. In Finland, state policy is to keep the tax element in drink high enough to maintain a fairly stable real price of alcohol. The sharp increase in drinking and in alcohol-related problems in the 1970s is attributed to changes in availability. In Poland, the real price of alcoholic beverages rose sharply during the 1960s and 1970s, but consumption has not moderated and the problems of alcohol abuse increased. It is clear from international experience with price as a control measure that heavier taxation does not always lead to a fall in the problems of excessive consumption.

8.2: *Restrictions on Drink Advertising and Anti-Alcohol Abuse Publicity*

Drink advertising is an obvious target for those concerned about problems created by the rising trend in alcohol consumption. But before advocating restrictive measures on such publicity in the hope of moderating the growth of

[11] In January 1976 the Government introduced a "constant-tax price index" which is not influenced by changes in indirect taxation occurring after November 1975. The purpose of this new index was to remove the effect of increases in taxes on drink, tobacco etc. from the measure of inflation used in wage negotiations, but very little use seems to have been made of it in this context.

consumption, the theoretical and empirical evidence relating to the effect of advertising on consumption should be examined.

Unfortunately, the point of departure is a negative one. Despite the vast outpouring of international research on the topic, a great deal of uncertainty and ignorance attaches to the whole question of advertising. The author of the most comprehensive available study on advertising prefaced his book with the following warning:

> After surveying the work of others and extending it in various directions, the study still reaches negative conclusions: there is barely a molehill of hard evidence behind the mountain of prose on the subject of advertising (Schmalensee, 1972, p. VIII).

Two preliminary points must be kept in mind. In the first place, most advertising is brand specific (e.g., "Drink Smith's Gin"). Sales of an individual brand may be increased either because its market share rises (people switch from Jones's to Smith's gin) or because sales of the product increase (people drink more gin). If the latter is the case, it is possible that the increase in the sales of the product is at the expense of a closely related product (people may switch from vodka to gin, or even from beer to gin). Most evaluations of advertising campaigns are not concerned with distinguishing between these possible sources of growth in sales, while many econometric studies concentrate on the effects of a firm's advertising budget on its market share. Comparatively little research has been addressed specifically to questions such as whether drink advertising increases the overall consumption of alcoholic beverages. Secondly, firms can advertise for reasons other than the desire to increase sales. The goal of the firm is to maximise its net worth over its planning horizon. In pursuing this goal many factors must be taken into account in addition to sales volume, among them costs, the structure of prices, the mix of brands being sold, and the behaviour of competitor firms. Economists have often argued that the main purpose of advertising certain products (such as cigarettes, detergents, and alcoholic

beverages) is to maintain the hold of a relatively small number of firms (oligopolists)[12] on the market, to avoid cut-throat price competition, and to prevent the entry of new firms. To the extent that these are the reasons why firms in these industries spend so much on advertising, advertising cannot be said to play a significant role in boosting total sales of the product (as distinct from sales of specific brands.)

Another reason why firms spend so much on advertising may be the way in which advertising helps them to segment the market, targeting certain brands at the young or the wealthy, for example, and pricing those brands so as to increase profits over what they would be if only one undifferentiated commodity were sold. If this is the case, then advertising allows firms to reduce sales to low-profit consumers and hence exacerbates monopoly restriction of output rather than increases total sales (see Adams and Yellen, 1971). The heavy advertising budgets for the high profit lager beers introduced in Ireland in the last decades might be an illustration of this strategy.

These arguments about the rationale for advertising serve to warn against expecting that a ban on advertising alcoholic beverages would have a marked effect on the level of drinking. They also draw attention to the generally ignored possibility that if all publicity were successfully suppressed, firms might be forced into price cutting to try to maintain or increase their market shares. It is, therefore, possible that banning advertising would lead to the elimination of the monopoly element that undoubtedly exists in the profits of the producers of alcoholic beverages in Ireland, resulting in lower prices to the consumer and some increase in the volume of sales – exactly the opposite of the effect desired by those who advocate such a ban on public health grounds.

[12] Hutchinson (1978, Table in Appendix A) estimated the largest four firms may account for as much as 85 per cent of the sales of distilled products and 96 per cent of brewed products in Ireland. A study of the Brewing Industry in Ireland published by the National Prices Commission (Monthly Report, February 1979) shows that Guinness and its affiliates accounted for 91 per cent of the domestic market in 1976/77.

Account must also be taken of the special problems that stand in the way of a small country taking unilateral action on this front. If, for example, advertising of spirits were banned in Ireland, Irish distillers would fear an erosion of their present market share (about two-thirds) as imported products continued to benefit from their worldwide publicity. Irish brewers are also aware of their need to defend their market against the growth of new companies, many of them benefiting from the international reputation of their brands. This is part of the reason why a ban on advertising of alcoholic beverages would be strongly resisted, and those who advocate this measure will have to produce fairly convincing evidence that it would yield benefits in terms of a reduction in alcohol-related problems if they are to succeed in having it implemented.

There has been some empirical research into the effects of advertising at the product level in other countries. In general, economists have tended to conclude that the effects of advertising on sales at the level of broad product groups, such as beer or alcoholic beverages, is small and/or statistically insignificant. Among the major studies, Schmalensee (1972) and Grabowski (1976) are distinctly sceptical in their conclusions. It is particularly interesting to note that Grabowski found advertising did affect sales of some "advertising intensive" commodities such as toiletries and detergents, but not alcoholic beverages. A recent study of the American brewing industry by the Federal Trade Commission concluded that the main function of brewers' advertising was to "artificially differentiate" similar products rather than to increase sales for beer as a whole.[13] On the other hand, Comanor and Wilson (1974) attribute a more important role to advertising than to prices in determining the pattern of consumer demand.*

[13] As reported in *The Economist*, 10 March 1979, p. 83.

* In the July 1980 issue of the *European Economic Review* Jack Johnston and Tony McGuinness and Keith Cowling discuss the effect of advertising on the aggregate demand for cigarettes in the UK. The evidence suggests that a 10 per cent rise in advertising yields at most an increase of 1 per cent in the long-run level of sales.

The absence of published data on product advertising in Ireland precludes full scale empirical research into this topic. Data on advertising outlays by the dominant beer marketing company in Ireland were made available to me on a quarterly basis for the period 1967-77. An econometric analysis of beer sales using income, prices, unemployment rates and advertising outlays as regressors revealed a small, but statistically significant, *negative* association between advertising and consumption. The most obvious explanation of this result is that advertising followed a counter-cyclical strategy, rising during the recession of 1975-76, but not having a measurable influence on sales. While these results are far from conclusive, they provide no support for the view that outlays on beer advertising have played a role in the rise in alcohol consumption in Ireland since 1968. It would be interesting to pursue this line of inquiry using data for spirits advertising.

We must not ignore the evidence that many new products and consumption patterns can spread very rapidly even when advertising is effectively banned. An obvious example, of importance throughout the western world, is the diffusion of the use of marijuana in the absence of commercial publicity. Another example of relevance to Ireland is the growth of a market in "artificial" contraceptives despite the fact that their sale and advertising for sale were illegal. Another example, even more relevent to the Irish experience with drink control policies, is the apparently rapid growth in the teenage market for cider despite the modest amounts spent promoting this beverage. Its popularity appears to be due exclusively to a significant price differential between it and beer, due to the lower tax rate on cider (at least up to the 1979 Budget). Similarly, certain brands of cheap wine are resorted to by heavy drinkers (and by juveniles) without being promoted through advertising. In Eastern European countries such as Poland, where there is little advertising of any form for alcoholic beverages, there has none the less been a rapid increase in consumption and the problems of alcohol abuse are very

serious. The widespread drinking of illegal poteen in nineteenth century Ireland owed nothing to the influence of advertising.

There are, moreover, several examples of unsuccessful attempts to promote alcoholic beverages through large scale advertising campaigns. Among the more important instances are light whisky in North America, heavy wines in California, and light beer in Ireland. It, therefore, appears that consumption patterns are not as easily manipulated, in either direction, as would seem to be implied by the attention devoted by some commentators to policy towards advertising alcoholic beverages.

As stated earlier, the real test of any control policy is not its effect on the overall level of consumption but its impact on those heavy drinkers who contribute disproportionately to the costs of alcohol abuse. It is implausible to suggest that a person addicted to alcohol is influenced one way or the other by advertising. A more realistic case could be made for the belief that the recruitment of young people to drinking could be reduced by banning drink publicity (or, less plausibly, by curbing the use of young people in drink advertising). It could be argued that a total ban on advertising enforced over a long period would eventually have a significant effect, which cannot be gauged from any of the evidence available on less thoroughgoing bans. But the persistence of heavy drinking among young people in socialist countries is not encouraging on this score. Moreover, it is interesting to note that the only full-scale sociological inquiry into the drinking patterns of Irish youth contains no reference to any role of advertising in persuading youths to start drinking (O'Connor, 1978). The reasons given for drinking by most of those interviewed can be grouped into broad categories such as "festive and social pleasure", "social conformity", "mood changing" and "personal effects", and it is difficult to evaluate the role, if any, played by advertising in promoting the belief that alcoholic beverages satisfy these needs more efficiently than other items of consumption.

As an alternative or supplementary policy to curbing drink advertising, publicity warning against the risks incurred through excessive drinking may be issued. An obvious parallel is with the anti-smoking campaign, which is discussed in Appendix D. The scope for success with a campaign of this type would depend on the extent of ignorance of the possible adverse repercussions of drinking similar to the situation that may have existed among smokers before the availability of evidence of a link between even moderate cigarette smoking and increased risk of lung cancer and other diseases. It appears that it is hard to make a firm statement about the effects of drinking on health – so much depends on the amounts drunk, the type and quality of the alcoholic products, the general life-style (diet, housing, driving habits, etc.) of the drinker, the length of time over which the drinking persists and whether it is episodic or continuous. While claims are frequently encountered to the effect that "heavy" drinking reduces life expectancy by 10 to 12 years (US Dept. of Health, Education and Welfare, 1971, Chapter IV), these amount to no more than the statement that persons who drink "too much" die prematurely. Studis of excess mortality among alcoholics, such as Adelstein and White (1976), and Sundby (1967) document conclusively that people admitted to mental hospitals with the diagnosis "alcoholism" suffer abnormally high mortality from a wide variety of causes, notably from cirrhosis, suicide, and accidents. Draper (1978) has shown that a high proportion of those admitted to an Irish hospital for alcoholism have incurred some brain damage as a consequence of their drinking. But the people studied in these reports are very heavy drinkers, amounting perhaps to no more than one per cent of the population. It is not possible to infer from the effects of alcohol on this special group the effects of moderate drinking on health in general. The evidence referred to by Kendall (1979) suggests that even relatively modest consumption of alcohol on a regular basis increases the risk of liver cirrhosis and has some effect on general health and life expectancy. Kendall remarks

"it is worth reflecting that if ethanol were a newly synthesised substance the Committee on Safety of Medicines would almost certainly not allow it to be administered to human beings" (p.370), but the force of this remark is somewhat blunted by the possibility that many relatively harmless substances might suffer a similar fate. Much more relevant, in my view, is the evidence of the effects on health of drinking patterns that can be taken as representative of large groups in society. The most important study of this type with Irish data is that by Dean *et al.* (1979) of male blue-collar workers at a Dublin brewery (who consume above average amounts of beer) which showed no increased risk of death from most of the conditions usually associated with alcoholism and no reduction in life expectancy compared with the population in general. The health hazards of normal to heavy drinking along the lines most typical of the Irish urban working class appear, therefore, to be relatively slight, and publicity concerning these hazards is unlikely to result in a noticeable change in drinking patterns.

8.3: *Controls on Availability*

Ireland inherited from British rule an elaborate system of controls on the places and times of availability of alcoholic beverages. The Intoxicating Liquor Acts (1924 and 1962) still retain this basic framework, but in 1962 some major liberalisations occurred. These extended the hours during which public houses could legally sell alcohol and increased the availability of extensions permitting drinking outside normal opening hours. The extension of opening from 10.30 p.m. (or 10.00 in winter) to 11.30 (or 11.00 in winter) was partly a recognition of the difficulty of enforcing the more restrictive hours, which were not in keeping with social patterns, particularly in rural areas. Following the 1962 legislation there was a sharp fall in the number of prosecutions of persons for being illegally on licensed premises during closing hours. Few would advocate a return to the shorter opening hours of the

1950s, and many would oppose any such move, but certain aspects of the availability of alcohol have attracted increasing attention from those concerned with the recent evidence of an increase in alcohol abuse.

Chief among these are the ready availability of opening hours extensions, the sale of drink in off-licences and supermarkets, and the lack of enforcement of regulations regarding sales to people under the minimum age of 18 years. The number of exemptions allowing after-hours drinking increased very rapidly during the 1970s, rising from six thousand in 1967 to 14 thousand in 1972 and 33 thousand in 1977.[14] These figures show, however, that the 1962 legislation did not, of itself, cause the increase: it was several years before the liberalisation permitted under this legislation began to be availed of to any significant degree. It is almost impossible to evaluate to what extent the availability of these exemptions played any role in the growth of consumption. Stricter control on this front might, at this stage, encourage alternative arrangements for social drinking, especially drinking at home as opposed to in public houses, a trend which is likely to develop in any event. The trend towards greater liberality in the granting of exemptions has become deeply entrenched and would be hard to reverse, even where the evidence strongly suggests that the result is an occasion for very heavy drinking. An example is provided by the attempt now under way to circumvent the prohibition on exemptions for any part of Sunday. Applications for exemptions commencing at one minute past midnight on Sunday evening/Monday morning have been refused on the grounds that such exemptions would violate the spirit of the 1962 legislation. The applicants have succeeded in having the case put to the Supreme Court for a judgment. According to newspaper accounts (7 June 1980) the Gardai testified that in these cases many of the patrons would be of the younger age group, aged 15 years upwards, who would by closing time be "stupid with drink... creating a

[14] Figures supplied by the Irish National Council on Alcoholism.

deplorable situation which leads to drunken driving and many serious rows".

Availability of drink to young people is not tightly controlled in Ireland. The legal minimum age of 18 years is not strictly enforced, partly because an offence is committed only if the vendor "knowingly" supplies drink to an under-age person. There is also a loophole in the legislation which permits the sale of alcohol to persons as young 15 years old for consumption off the premises in quantities of one pint or less (see Irish National Coucil on Alcoholism 1978). In general, a problem exists in trying to establish a customer's age because identity cards or other proof of age are not usually carried by customers. However, some supermarkets have introduced their own code of practice and refuse to sell to anyone who in the opinion of the manager is a minor.

In studies of alcohol problems, "availability" is usually taken to refer to conditions of sale and other aspects of accessibility. But the most important aspect of availability may be whether alcohol is financially within the reach of certain population groups. We have seen earlier that there has been no sustained upward movement in the price of drink relative to the general cost of living since 1961 in Ireland, whilst real incomes have grown at an average rate of about 3 per cent a year. Undoubtedly young people are now much more readily able to afford to purchase enough alcohol for an evening's drinking than was the case ten or twenty years ago. Young people are also much less closely supervised by their parents, more likely to have access to a car and enjoy a shorter working week. All these factors may exercise as much, if not more, influence on drinking patterns among the young than the narrower issue of where and when they can obtain alcoholic beverages.

In an interesting comparison of the more restrictive Scottish laws with those of England and Wales, Clayson (1977, p. 81) concluded that the narrower Scottish laws created social pressure to drink, and hence led to a greater misuse of alcohol. This view led to change in the Scottish law, allowing 11.00

o'clock closing and liberal exemptions. Three years after this liberalisation Dr. Clayson is reported to be satisfied that it has led to a decrease in drunkenness, assaults, and drunken driving.[15] On the other hand, it is possible to point to situations where liberalisation of availability is believed to have led to increased consumption. Lowering the legal minimum drinking age in parts of the United States and Canada during the 1960s, for example, is believed to have led to an increase in teenage drinking and alcohol abuse (Robinson, 1977). The liberalisation of Finnish licensing laws in the late 1960s was designed to increase the importance of drinking in restaurants at the expense of off-premise consumption, but is believed to have superimposed new drinking patterns on existing ones, with the result that total consumption rose sharply (Mäkelä and Österberg, 1976).

However, it is one thing to show that liberalisation of availability may, in certain circumstances, increase consumption but it is another matter to establish that restricting availability would moderate established drinking patterns. Controls strict enough to moderate established patterns seem only to have been implemented during periods of major social change, notably in Britain and Ireland during the First World War.

One of the most noticeable features of the restrictions imposed on the distribution of alcohol in this country is the system for licencing public houses and limiting their number.[16] While this policy may tend to reduce drink sales and promote temperance, its major impact seems to be to create local monopolies in the retail distribution of alcoholic beverages. A liquor licence is a state-backed artificial restraint on

[15] *The Observer*, Sunday, 8 July 1979, p. 4.

[16] The number of licences issued for on premise sale of alcoholic beverages is strictly related to population and the existing distribution of licenced premises. There has been little change in the total number of public houses over the years, but a decline in rural areas and an increase in the towns. Once a licence is obtained there is no limit to the volume of sales it permits. Unlike other countries which operate a system of licencing bars, in Ireland there are no restrictions on locating licenced premises close to schools or churches.

competition. If it is believed that this restraint has beneficial effects on the level and pattern of drinking, there are good arguments in favour of restructuring the administration of this system so that the state gathers most of the economic rent that is thereby created. It is extraordinary to note that in 1976 the state obtained only about £50,000 from retail liquor licences, about £4 per licence. In view of the enormous value that possession of a licence may bestow on a property, there is a case either for making more of them available (which would probably have little effect on overall alcohol consumption) or for the state to extract most of the economic rent bestowed by the licence. This could be done by periodically selling off-licences to the highest bidder.

Care has to be exercised to ensure that restrictions on the availability of alcohol intended to curb overall consumption are not maintained in force merely to protect the artificial local monopolies they have accidentally created. In Ireland, the Licensed Vintners' Association acts as an advocate of the right of its members to a monopoly of the on-premise sale of alcohol, using arguments that are at times couched in the same language used by those interested in alcohol control policy. This coincidence does not imply, however, that all arguments for restriction of availabiity are motivated by the self-interest of the drink trade – far from it. If a policy of more restricted availability were espoused, however, care should be taken to avoid creating artificial monopolies that serve no worthwhile social function.

A further aspect of availability that deserves attention is the distribution of consumption between drinking on licensed premises and drinking at home. The importance of the public house in Irish drinking patterns could be viewed as an additional factor, over and above the amount of alcohol consumed, that tends to aggravate the problems arising from drinking. At least two reasons could be suggested for this belief: first, drinking away from home may have adverse effects on family life that would be mitigated if consumption were within

the family circle, and secondly, drinking in public houses is obviously part of the reason for the high accident rate on Irish roads during the hours immediately after closing time.

If it were felt desirable to try to switch consumption from the public house to the home, it is not easy to suggest policies that would have this effect. Such policies should discourage on-premise consumption by at least as much as they encourage consumption at home: there would be no gain from a public health perspective if new patterns were merely added to existing ones. One aspect of this side of Irish drinking patterns that requires further study, and that might offer scope for relevant policy initiatives, is the small price differential that exists between off-license and on-license prices of alcoholic beverages. At present it costs as much, if not slightly more, to purchase bottled beer in retail outlets as in a public bar. This may be a factor reinforcing the traditional Irish preference for drinking in public houses, and might be investigated with a view to changing the balance towards home consumption. However, the price factor is hardly the main consideration for the strong attachment to drinking in public houses in Ireland, and it is unlikely that a major change could be brought about by any change of pricing policy. Consumption in public houses might be much more significantly affected by a very strict enforcement of the legislationon drinking and driving, especially if this extended to allowing the Gardai to screen drivers leaving public houses at closing time. This question is taken up again in the next sub-section.

8.4: *Penalising the Consequences of Alcohol Abuse*

Current medical opinion appears to be mainly of the view that alcoholism is a disease and that the best approach to the problem is to provide more resources for its treatment. The efficacy of various approaches to treating alcoholism has, however, been questioned (see Kendall, 1979, for a summary of the evidence) and it is clear that despite the increase in the

resources available for treatment the incidence of excessive drinking has risen steadily. It could even be argued that the emphasis on the disease concept of alcoholism subsidises the heavy drinker and encourages him to persist by reassuring him that he is suffering from an illness which it is someone else's job to treat. To the extent that there is truth in this view it is distressing to see resources diverted from other areas of the health services, such as the care of long-stay psychiatric patients, to expensive but relatively ineffective approaches to the problem of alcohol abuse. An alternative would be to take a less tolerant view of excessive drinking, and in particular to try to make the drinker bear as much as possible of the social cost of his behaviour. In practical terms, this would amount to adopting a sterner policy against public drunkenness, reduced availability of paid leave to undergo treatment for drinking problems, less support from public funds for centres treating alcoholics, and a tougher policy towards driving while drunk.

In fact, it is hard to envisage much change in our policy towards public drunkenness, and in any event it is doubtful whether a tougher policy would result in any important changes in drinking patterns. Policies towards absences due to heavy drinking do need to be more openly discussed, and employers should be encouraged to collect accurate data on the costs they have to bear because of alcohol abuse. This would require co-operation from the medical profession, who are placed in a very difficult situation by having to issue certificates to employees whose real problems may not be medical. Perhaps society's tolerance of heavy drinking could be reduced if non-drinkers and moderate drinkers had a clearer understanding of the costs that are imposed on them by absences from work due to heavy drinking.

But it is undoubtedly in relation to drunken driving that the strongest support for a less permissive policy would be forthcoming. The contribution of drunkenness to road accidents was recognised in Ireland by the late 1950s, and was used as one of the arguments in favour of allowing general

Sunday opening in order to avoid the old system of driving to a distant venue in order to drink as a bona fides traveller (cf. Whyte, 1971). Recent studies reveal that up to forty per cent of driver, and fifty per cent of pedestrian, fatalities involve people with blood alcohol levels above the legal limit (Crowley *et al.* 1980).

Tougher measures to deal with drunken driving were not enacted until 1968 and their enforcement was delayed by "administrative difficulties" until 1971. Following the use of the breathalyser, accidents between the hours most closely associated with drunken driving (9 p.m. and 3 a.m.) declined slightly, but they reached a new peak in 1977. Even more significant is the fact that the proportion of all accidents occurring between these hours showed no sustained fall after the introduction of the breathalyser. In 1977, as in 1968, over one-third of fatal road accidents occurred between these hours. The original breathalyser legislation was gradually rendered inoperable through persistent court challenges on the way it was administered, and new legislation had to be introduced towards the end of 1978. There was a significant rise in the number of prosecutions in the period following the passage of the new law (see Table 7 above). These measures were widely credited with significant results over the Christmas 1978-New year 1979 period, but it appears that the effect was not lasting (An Foras Forbartha, 1979). In Britain the breathalyser is reported to have had a marked initial impact which gradually wore off (Harvard, 1977).

It is very difficult to say why in Ireland, as in Britain, the courts appear willing to uphold technical defences against charges of drunken driving – defences that would not be entertained in other areas.[17] The complexity of the interactions between social attitudes and rule enforcement in this area can hardly be exaggerated. The problem has been summarised in the American context as follows:

[17] The conviction rate for charges of drunken driving was 55 per cent in 1977 compared with 77 per cent of all other non-indictable offences. I am grateful to David Rottman for drawing my attention to this.

> The pattern in America so far has been not to make use of the increased possibilities in deterrence. We have been constrained from writing effective legislation (for breath tests) due to fear of encroachment on individual liberties, and beyond that, our basic lack of commitment to the problem; we have not maximised the legislation we have by providing equally effective enforcement. The point here is that legal and social constraints are just as real as any knowledge gap. (Hoffman, 1973, p. 99).

Even less encouraging is the fact that in countries such as Sweden where there has been a genuine commitment to maintaining very severe penalties on drunken driving over the past fifty years there is still believed to be a serious problem of drinking and driving. Paradoxically, it may be that the heavy penalties following on conviction (loss of licence, possible jail sentence) deter judges from convicting. They certainly give the defendant every reason to obtain the best legal advice available, the cost of which is, of course, similar to a fine in deterrent effects. However, a policy of lighter sentences for first offences might lead to less resistance to the enforcement of the laws and ultimately prove more conducive to sobriety on the roads.

The whole question of penalising those whose drinking imposes cost on the rest of society is fraught with difficult social and ethical problems, not to mention the overriding issue of political feasibility. The two areas where it seems there is greatest scope for action are in relation to drink-related absence from work and drunken driving. The scope for action to curb alcohol abuse by penalising behaviour in these areas needs to be explored as part of any attempt to formulate a policy to curb excessive drinking.

Section 9

What Scope is there for an Alcohol Control Policy?

The idea that a society which is worried by its tendency to produce people who abuse alcohol can legislate its way out of this problem appeals to many. The point of view is summarised in the folowing quotation:

> Since we are not able to manipulate personality and produce a race with no neuroses, the only realistic method of exerting a benign influence on the prevalence of chronic alcohol problems is by control of the environmental conditions of drinking and it is the availability element that remains the prime candidate for control (Edwards, 1971).

Effective controls on availability can, however, only be enacted and enforced in a society where there is strong and widespread support for such measures. There may be a vicious circle leading from the acceptance of a pervasive role for alcohol in social life to low community support for controls on its consumption and low and ineffectively enforced penalties for alcohol-related social problems. The clearest example of the operation of this type of attitude to alcohol in Ireland is the history of legislation and rule enforcement with regard to drunken driving. As we saw in the previous section, it has taken a long time to draft and enact legislation designed to deal effectively with this problem, and we have yet to see this new legislation enforced to the point where it has a sustained impact on the accident statistics.

The trend in policy towards alcohol in most western countries has been to treat it more like a normal commodity with relatively few restraints on where, to whom, and when it

can be sold. This in turn reflects the declining influence of the temperance movement, with its emphasis on the moral evils of heavy drinking. Concern now tends to focus on the public health problems generated by alcohol consumption and its role in accidents and family problems.

In Ireland we have moved rapidly from the situation in which drinking was closely associated with intoxication and perhaps disorderly behaviour to a much more diffuse role for alcohol in our society. At the same time, the average level of consumption has risen sharply and some of the indices of alcohol-related problems, such as admissions to mental hospitals for alcoholism or arrests for drunken driving, have also increased. The appropriate response on the part of public policy to these developments is not easily prescribed. On the one hand, the growing evidence of an increasing public health problem arising from higher levels of alcohol consumption naturally provokes a demand for preventive measures. Current thinking seems to favour measures that would tend to moderate the rate of increase in alcohol consumption in general, or perhaps even bring about a reduction in its level. These measures would include higher taxation of alcohol, stricter enforcement of the laws against drunken driving, and a reversal of the recent trend to ease restrictions on where and when alcohol may be sold. However, critics of this approach point out that higher taxation and reduced availability place penalties on the normal drinker without any guarantee that the behaviour of the problem drinker will be affected. They claim that there is very little evidence to show that this approach would have much of an impact on the public health problems caused by heavy drinking, while the costs in terms of limitation of freedom for the majority of moderate drinkers may be unacceptably high.

Apart altogether from the effectiveness of such measures, their political feasibility must also be considered. The long history of ineffective attempts to penalise drunken driving in Ireland and elsewhere in the western world illustrates the

obstacles in the way even of a policy measure that commands support in principle from almost all quarters. Other measures, such as eliminating drink advertising or heavier taxation of alcohol are not only less clearly appropriate as responses to the problem, but also confront vested interests at least as powerful as those that have persistently rendered legislation on drunken driving ineffective. The state can, of course, continue to spend money on health education designed to provide information on the hazards of heavy drinking and to create a less tolerant climate of opinion towards drunkenness, but the net impact of such publicity is likely to be slight. Faced with these difficulties, it is tempting to suggest that non-intervention is the only appropriate response. This would, however, amount to an admission that nothing can be done either to advance the preventive approach to the public health problems of alcohol abuse or to reduce the social costs of heavy drinking. Such a pessimistic verdict is not, in my opinion, fully justified by the evidence reviewed in this paper. It is not, however, for me to put forward detailed proposals designed to achieve some desired modification of drinking practices. This must be done by those more directly involved in policy formulation on the basis of the type of information that has been brought together in this study.

Appendix A

Measuring the Economic Costs of Alcohol Abuse in Ireland

Section 6 contains a discussion of some of the conceptual issues that need to be resolved before it is possible to draw up a list of the costs imposed on society by excessive drinking. It should be clear from that discussion that I advocate a fairly narrow idea of "costs" in this context, and take the view that it is very difficult to say with any accuracy what is the net contribution of alcohol to many of the problem areas where it is implicated. Moreover, it was emphasised that the narrow economic concept of cost excluded many of the most appalling aspects of the alcohol problem – such as its role in family conflict and violence. Bearing these limitations in mind, the following is a very rough attempt to place money figures on the various items in the list of costs of alcohol abuse.

Road Accident Costs: The costs to the community of the material damage, medical services, police costs and loss of output due to road accidents is put at £40 million for 1976 (An Foras Forbartha, 1977). In the United States, about 15 per cent of the total costs of road accidents have been attributed to alcohol (Berry, 1976) while the Department of Transport in Britain uses a somewhat lower proportion. (A higher proportion of fatalities is attributed to drunken driving, but in many of these only the drinker is involved.) Allowing for the fact that it is only damage to other's property that we wish to include as a cost of alcohol abuse whereas the Foras Forbartha estimate of cost is more inclusive, £5 million seems a plausible estimate of the cost to society of alcohol-related accidents in Ireland in 1976.

Health-Care Facilities: We wish to include not only the cost of health services devoted to alcoholism, but also those resources devoted to treating people for other illnesses which have been brought on by heavy drinking. In fact there are no figures for either category in Ireland. The Voluntary Health Insurance Board in the year ending February 1977 paid out £0.174 million in claims arising from patients with the diagnosis "alcoholism/alcoholic pyschosis". This amounted to 1.6 per cent of the Board's total claim expenditure. The average outlay per claim for this diagnosis was £356, which can be applied to the 6,101 hospital admissions for alcoholism (see Table 6) to obtain a cost of £2.17 million or just under one per cent of total state current expenditure on health. Geary and Dempsey (1979) show that in 1965/66 the percentage of disability claims arising due to "mental, psychoneurotic and personality disorders" was 8.6 per cent for males and 12.5 per cent for females. This category includes alcoholism, but of course many alcohol-related illnesses appear in other categories.

These relatively small figures omit any cost of health-care facilities due to the excess morbidity of alcoholics for conditions such as accidents, attempted suicide, pneumonia, liver cirrhosis and so forth. There are no studies of the excess morbidity of alcoholics in Ireland on which to base an apportionment of general health expenditure to alcohol abuse. A very wide range of estimates is available for other countries. At the high end of the scale is the 10 per cent of current health expenditure in the United States attributed by Berry (1976) to alcohol-induced illness. At the other extreme, a calculation based on the Adelstein and White (1976) study of mortality among alcoholics led to the conclusion that only about one per cent of public health expenditure in England and Wales was attributable to alcohol. In view of the very liberal method used by Berry to attribute illness to alcohol, and the 4 to 1 ratio of the US to Irish death rate for cirrhosis of the liver, it seems reasonable to use a figure well under 10 per cent in the Irish context. Accordingly, I have entered a figure of £8 million or

roughly 3 per cent of total current public spending on health, as the cost attributable to alcohol abuse. It should be noted that only about a quarter of this figure would be expenditure on patients diagnosed as suffering from alcoholism, the rest being an allowance for illnesses in which heavy drinking plays a part.

Social and Community Costs: The cost of police work associated with alcohol-related road accidents has been included under the costs of road accidents. Police and court costs associated with arrests for drunkenness and for drunken driving where no accident occurred are hardly a major item, but some allowance should be made for them. It is probably also true that social workers and the administrators of the social welfare system have to devote some of their time to trying to deal with the family and community problems caused by heavy drinking. Total current expenditure on social security and welfare (excluding the value of the benefits and assistance paid) amounted to £35 million in 1976. To apportion 20 per cent of this to the alcohol problem would seem generous enough to allow for the police and court costs mentioned above, as well as the social workers and administrators dealing with alcoholics and their families. This yields a very tentative figure of £7 million under this heading.

Loss of Output: The figures for road accidents included an estimate of the loss of output due to injury and deaths attributable to alcohol-related accidents. Estimating the costs of absence from work due to drinking is a very contentious area. The self-employed and farmers who stay away from work because they are drinking bear the costs of their absence in the form of lower income, and cannot be said to impose a burden on society. If employee absences are running at five per cent in a fairly predictable manner (Mondays and after holidays, for example), producers presumably adjust their production planning and staffing to take this into account, and only in a situation of very full employment could it be said that output is lost due to these absences. But if absent workers are paid while

not at work labour costs are increased unless the alcoholic makes up for lost time or is covered by increased efforts from his collegues. The damage to the community lies in the higher costs of production that must borne because of the decreased efficiency of the labour force (not offset by decreased wage costs) as a result of alcohol-related absences. A ten per cent absence rate might raise unit labour costs by eight per cent (the difference being made good by higher productivity from the non-absent labour force), which in Ireland would raise product prices by about four per cent. The real cost of alcohol-related absences to the community lies in the fact that this four per cent price penalty lowers the level of production and employment in Ireland because it causes some Irish firms to lose sales on export or domestic markets. It is very hard to say just how sensitive the level of production in Ireland is to a cost penalty of this magnitude – it has been argued in another context that this sensitivity is not the major constraint to expanding production (and reducing unemployment) in Ireland (Kennedy and Foley, 1978) – but some penalty must be incurred because of reduced efficency due to excessive drinking.

This discussion is very hypothetical because we have no estimates of the proportion of absences attributable to alcohol. Ó Muircheartaigh (1975) reports an absence rate (for all causes) of 5.6 per cent in Irish industry in 1971.[18] The rate has probably risen since then, judging by the rise in the number of disability claims that occurred in 1974 and later years. (On the other hand, longer paid leave, which now extends from before Christmas until the New Year in many employments, has possibly lowered the numbers absent because of heavy drinking at that time of year.) Using the absence rate of six per cent and assuming the proportion attributable to drinking is as high as one-third would imply that unit labour costs are about two per

[18] He concludes that "absence rates in Irish manufacturing industry, although high in relation to estimates for the United States, do not compare unfavourably with other European countries" (p. 126). One could therefore claim that Irish producers are at no relative disadvantage in international competition because of absenteeism from all causes.

cent higher because of alcohol-abuse, so that final prices may be about one per cent higher. The lost output attributable to this penalty could be in the region of one per cent of the value of output in the non-agricultural sector, that is £30 million. This figure is the most tentative of all those included in this exercise, but it allows a generous margin of error on the high side by attributing one-third of all absences from work to drinking.

Transfer Payments: In addition to these real resource costs, alcohol abuse imposes a financial burden on the state because alcoholics and their dependants become entitled to transfer payments as a consequence of absence, sickness and death. The main payments involved are unemployment benefits (including pay-related benefits) and assistance, occupational injuries benefits, disability benefits, retirement pensions, widows' pensions and invalidity pensions.[19] We have no hard evidence whatsoever on which to base an allocation of part of these transfer payments to alcohol abuse. On very subjective grounds I have made the following apportionment: 30 per cent – invalidity pensions; 20 per cent – unemployment assistance, occupational injuries benefit, disability benefit; 10 per cent – unemployment benefit, pay-related benefit, retirement pensions, widows' pensions. Applying these proportions to the total 1976 expenditure under these headings yields an estimate of £38 million attributable to alcoholic abuse. A further fiscal consideration applies to the loss of tax revenue due to the decrease in income and expenditure because of alcohol-related illness and absence. This loss would not be very major because many of those affected would maintain their expenditure at a fairly high level from disability benefits and other transfer payments (including, of course, their salary if their employment entitles them to payments while absent). I have arbitrarily set this loss of tax revenue at one-third the guesstimate of the value

[19] For some of these there is an initial period during which no benefits are payable. Disability benefits, in particular, do not cover the first three days of any spell of illness, but individuals may qualify immediately under occupational schemes.

of the output lost due to absence. This yields a figure of £10 million.

Drawing these estimates and guesses together the following list is obtained:

	Real Resource Costs:	*£ million*
1	Road accidents	5
2	Direct health care costs	8
3	Social services	7
4	Lower production due to absences	30
	Transfer Payments	
5	Unemployment benefits, pensions, disability pay	38
6	Loss of income taxes and indirect taxes due to illness, absences etc.	10

To add all these costs together would entail double counting by, for example, including both the loss of income etc. due to absenteeism (Item 6) and the loss of production due to absenteeism (Item 4). A more meaningful total is the sum of the cost to the exchequer. The sum of the costs (both real resource and transfers) borne by the state (that is, by the taxpayer) includes items 2, 3, 5, and 6, a total of £63 million. The losses due to road accidents are borne by the public at large, mainly as higher insurance premiums, but also more directly (and more unjustly) in uncompensated damage. The value of the lost output due to alcohol-related from work is the most nebulous loss, in my view. Perhaps those who bear the brunt of this are the unemployed who may be deprived of a job by the reduced efficiency of the Irish economy. In any event, only the loss of tax revenue and the increased unemployment benefits payable due to this factor should be included among the costs of alcohol abuse to the state.

There are a number of comments that could be made on the figure of £63 million arrived at in my calculations. In absolute terms it is very large, exceeding, for example, the estimated cost

of *all* road accidents. In as much as there has been very little publicity about the economic costs of alcoholism, but there is a growing awareness of the damage caused by road accidents, some purpose may be served by drawing attention to this estimate of the costs of alcohol abuse. On the other hand, it should be immediately obvious that the item which accounts for over half the total is a very rough estimate of the transfer payments due to excessive drinking rather than a real resource cost. Perhaps the most important aspect of this estimate is its relationship to the tax revenue from alcoholic beverages. This point is discussed in Section 8.

Appendix B

Estimates of Price and Income Elasticities for Alcohol in Ireland

There have been several previous studies of alcoholic beverages consumption in Ireland designed to obtain estimates of the influence of prices and income. The following is a summary of these studies and their findings:

Study	*Data used*	*Beverage*	*Range of estimated elasticities*	
			Price	*Income*
Walsh and Walsh (1970)	1953–67 (annual)	Beer:	−0.1– 0.0	0.5–0.8
		Spirits:	−0.6– 0.3	1.5–2.0
Kennedy, Walsh and Ebrill (1973)	1948–70 (annual)	Beer:	0.0– +0.3	0.5–1.1
		Spirits:	−0.9– −1.5	1.3–1.7
McCarthy (1977)	1953–74 (annual)	Alcoholic Drink:	−.62– −.80	1.24–1.61
Pratschke (1969)	1965/66 household budget	Alcoholic Drink:	N.A.	1.79

These studies include a wide range of other variables, and tackle the estimation of elasticities in widely varying ways. Technical econometric issues are discussed in detail in the individual studies.

Despite the wide range of point estimates displayed above, there is an agreement that the price elasticity of demand for alcohol is less than unity, and that the income elasticity is above unity. There is also agreement that beer is less price and income elastic than spirits. Attempts have been made to estimate the cross-price elasticity (beer and spirits) but with inconclusive results. This at least suggests that those two beverages are not close substitutes (Kennedy, Walsh, and Ebrill, 1973).

Using quarterly data for the period 1965–77, new estimates of price and income elasticities have been calculated for this study. A number of other variables were experimented with, such as the relative beer/spirits price and the unemployment rate, but no evidence emerged of a consistent, significant effect of these variables. A variety of lagged specifications was tried but in general the results show that the simplest specification in contemporaneous values of all variables performed as well as more elaborate specifications.

In order to explore the best specification as between linear, double-log, or some other formulation, the Box-Cox technique for estimating λ in the following equation was used

$$Q^{\lambda} - 1/\lambda = a_0 + a_1(Y^{\lambda} - 1/\lambda) + a_2(P^{\lambda} - 1/\lambda)$$

where $\lambda = 1$ the specification is linear, where $\lambda = 0$ it is equivalent to double–log. Rather than specifying the values of λ *a priori,* the algorithm discussed by Chang (1977) was used to obtain maximum likelihood estimates. The estimates obtained were for beer $\lambda = -0.5$, for spirits $\lambda = -0.2$. The resulting elasticity estimates for 1977 values of the variables are:

	Beer	*Spirits*
Price	−0.26	−0.61
Income	1.08	1.37

These estimates are broadly in line with those obtained from previous studies using different data periods and econometric techniques, and support the conclusions that spirits are more price and income elastic than beer, and that both beverages are quite price inelastic.

Appendix C

Price Elasticity, Expenditure and Tax Receipts

The elementary proposition that if the price elasticity of demand, η, is less than unity, an increase in price will lead to increased expenditure on the item, is often ignored in discussions of alcohol taxation policy. All the evidence in Ireland points to an η for alcohol well below unity. Hence tax policies that raise the (real) price of alcohol will lead to increased expenditure on alcohol – a phenomenon that is sometimes identified as part of the problem that higher taxation is supposed to curb!

Of course increased expenditure on alcohol as a consequence of higher taxation implies rapid increases in tax revenue. It has been shown (Geary, 1973) that an increase in tax per unit on a commodity will lead to an increased tax yield from that commodity as long as the elasticity is less than the ratio of the retail price to the tax per unit ($\eta < P/t$). In Ireland taxation accounts for roughly one half the final price of alcohol, so that the price elasticity of demand for alcohol would have to be in excess of 2 before tax increases would result in reduced tax yield. With an elasticity of about – 0.4 a one per cent increase in the tax rate would result in a 0.75 per cent increase in tax revenues, other things remaining equal.

Appendix D

Comparisons with Cigarette Smoking

Several of the issues discussed in connection with alcohol have close analogues in the area of cigarette smoking. With the growing evidence of a link between cigarette smoking and lung cancer, there have been numerous attempts to discourage smoking in the interests of public health principally by eliminating advertising and issuing warnings on the health hazards of smoking. It is relevant to see what can be concluded from international experience in this area.

The evidence for the success of the anti-smoking campaign is mixed. In the UK, Sumner (1971) tried to measure the net effects of the adverse publicity about smoking which followed the 1961 Royal College of Physicians' report using dummy or trend variables to measure any shift that occurred in the regression of consumption on price and income in 1962 and subsequent years. He found low price and income elasticities, and a negative post-1962 trend which, as Atkinson and Skegg (1973) point out, implies that by 1967 demand had fallen by eight per cent instead of rising by four per cent as would have been expected on the basis of the pre-1962 relationship. The Atkinson and Skegg refinements of Sumner's tests allow for a more complete exploration of the impact to 1970 of adverse publicity, distinguishing between male and female consumption, and between number of cigarettes and weight of tobacco. The conclusions reached by Atkinson and Skegg are relatively pessimistic regarding the net effect of the anti-smoking publicity: "it appears that publicity had the effect of causing a suden fall in consumption in 1962 and 1965 (and

1971), with consumption returning gradually to its previous level. The overall fall was small (around five per cent) and was accounted for entirely by men" (p. 278). Peto (1974) attributes a significant and permanent reduction of about six per cent to the 1962 Royal College Report, and an insignificant and small effect to banning TV advertising in 1965.

The economic effects of various controls on cigarette advertising in the United States have been evaluated by Hamilton (1972). He concluded that the industry *welcomed* the ban on TV advertising as a way of reducing competition and raising profits. To evaluate the effect on cigarette consumption account must also be taken of the impact of terminating the anti-smoking publicity that the cigarette companies had to finance to match their TV advertising. Hamilton found that cigarette commercials increased consumption by less than anti-smoking publicity reduced it, so the net effect of eliminating both types of publicity was an increase in smoking. His study is consistent with the British studies cited above in finding relatively minor effects from advertising on the level of consumption. Schmalensee (1972) found no significant effect of advertising on the total level of cigarette sales in the US. On the other hand, Warner (1977) found that "the cumulative effect of years of anti-smoking publicity has been substantial. The analysis suggests that *per capita* consumption would have been one-fifth to one-third larger than it actually is, had the years of anti-smoking publicity never materialised" (p.649).

O'Riordan (1969) was the first to explore this issue in Ireland. Using data for the period 1953-69 he found some evidence of a decline in consumption associated with the cancer scares of 1962 and 1965. He does not specifically address the impact of advertising, and his data end before the phasing out of cigarette advertising on Irish TV in 1971. A more recent study (Walsh, 1980) found that there was a very significant change in the relationship between prices, incomes and tobacco consumption in the 1960s. Since the mid-1960s tobacco sales have ceased to benefit from growth in income, and have

become much more sensitive to the real price of tobacco than was the case up to then. This change appears to be due to the spread of knowledge of the health hazards of smoking rather than to specific measures such as curbs on cigarette publicity. The level of smoking has, however, remained high partly because the real price of cigarettes fell very sharply during the 1970s.

There has also been a definite switch to "low tar" cigarettes, which now account for over 20 per cent of the UK market (CSO UK 1978, p. 141). The willingness to alter the type of cigarette consumed in the hope of reducing the risk of health might suggest parallels in regard to alcohol consumption, such as a switch to better quality drinks or from strong to weaker beverages. The French experience in reducing the consumption of low quality wines shows that approach can be successful, but this has little relevance for Ireland, while experiments in other countries aimed at promoting new, "safer" or "more civilised", drinking patterns, such as the Finnish promotion of drinking with meals, seem to have led to a net increase in drinking, rather than the substitution of the new patterns for the older, less desirable ones. If the alcoholic strength of beer is reduced under pressure from the government (as happened in Sweden during the 1960s) there is the danger that beer drinkers will be induced to switch to spirits.

In attempting to assess the potential for alcohol control policies on the basis of those experiences with cigarette smoking, it has to be kept in mind that the adverse repercussions of heavy smoking are borne more directly by the smoker than is the case with heavy drinking. The smoker, for example, inflicts little damage on society comparable to that caused by the hit and run drunken driver. Moreover, the health dangers of smoking are clearer than those of drinking. There is therefore less ground for expecting a health education programme centred on alcohol to achieve effects similar to those, limited as they are, that have resulted from increased knowledge abut the health risks of smoking. There also appears

to be less scope for modifying drinking patterns in a way that would reduce the adverse repercussions of alcohol consumption analagous to the switch to low-tar cigarettes.

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