

# **THE COST OF ALCOHOL RELATED PROBLEMS IN IRELAND**

**A Study  
by**

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## **THE COST OF ALCOHOL RELATED PROBLEMS IN IRELAND**

### **1. Conceptual Issues.**

Estimating the cost of alcohol abuse and excessive drinking presents formidable conceptual and practical difficulties. Economists use the concept of opportunity cost, which is the value of the resources foregone by society as a result of excessive drinking. This is much more difficult to estimate than, say, the direct costs generated by excessive drinkers in terms of treatment of illness, the cost of alcohol related accidents and the value of output lost through alcohol related absence from work.

### **2. Private and external costs and benefits.**

Some of the costs (and benefits) of alcohol consumption are borne by the individual consumer (private) and some fall on third parties (external). External costs include damage to third parties from alcohol related road accidents and crime. The families of alcoholics suffer great emotional distress and often economic deprivation and a comprehensive measurement of costs should ideally include these.

### **3. Treatment of unemployment.**

If an economy is operating at full employment, an alcohol-damaged worker will reduce productivity and thus Gross National Product. In an economy an unemployed worker can readily replace where there is unemployment the alcohol-damaged worker with no reduction in GNP. As most countries have some level of unemployment or immigration, the costs of alcohol use in terms of GNP may only be the cost of recruiting and replacing labour. In countries such as Ireland v/here there is strong employment protection legislation making it difficult to fire an alcoholic employee, significant losses of output or costs may be incurred as a result of employees with alcohol problems even when there is less than full employment.

### **4. The benefits of alcohol use.**

Economic theory assumes that consumers are fully informed about the benefits and costs of the goods that they consume and thus make rational consumption choices. Clearly moderate drinking of alcohol provides benefits in the sense of economic theory, to the consumer but if a person is addicted to alcohol, he/she cannot be said to benefit from alcohol consumption. If addiction is defined as providing not benefits but costs to the addict or to society, as is obviously the case, then expenditure on alcohol by addicts is a cost to society. An allowance for the cost of consumption by addicts should therefore be included in the cost of alcohol abuse.

## **5. Private and social costs**

Some of the costs of alcohol abuse are borne by the abuser and some by others either directly or indirectly affected by the abuse. The abuser's family, particularly those economically dependent on him/her suffer most acutely but those unconnected to the abuser also suffer. The victims of drunk drivers and their families are the most obvious "third party" victims of alcohol abuse. If car insurance premiums rise as a result of alcohol related accidents or health insurance premiums rise as a result of the cost of treating alcohol abusers, all motorists or all those seeking health care insurance suffer. The existence of such social costs is the major reason for policy intervention and taxes on alcohol above the levels imposed on other goods is justified as compensating for the negative social consequences of alcohol abuse.

All attempts at cost estimation must make assumptions about the behaviour of drinkers, i.e., whether they are aware of the health risks of alcohol abuse or not and to what extent their choices are "rational". Many studies show that while heavy drinkers, most of who may be assumed to be addicted have the most individual problems, they account for only a minority of all alcohol-related problems. The question then arises as to whether cost studies should focus on the abusers or on the totality of alcohol related problems.

## **6. Causal links and availability of data**

In addition to the above conceptual difficulties, there are very serious problems in collecting and interpreting data on the consequences of alcohol abuse and the causal link between such abuse and illness, accidents and violence. While alcohol abuse is associated with several physical and mental illnesses, other factors may contribute to those illnesses also and isolating the effect of alcohol may be very difficult. For example many people who drink heavily also eat unhealthy diets and do not take exercise. If they suffer heart disease or cancer to what extent can these diseases be attributed to their excessive drinking or to the other aspects of their unhealthy lifestyle?

Even if certain illnesses, accidents or crimes could be unequivocally attributed to alcohol abuse, the statistics on such events may be inadequate. Except in the case of admission for alcohol poisoning or alcoholism, the drinking habits of hospital patients are rarely recorded. The blood alcohol levels of people involved in accidents and crimes are not always recorded and in many cases alcohol consumption can only be inferred. Even the crudest estimates of the social costs of alcohol involve quite heroic assumptions and creative interpretation of data.

## **7. Studies of the cost of alcohol problems in Ireland.**

The conceptual and practical issues outlined above show the great difficulty of estimating the overall cost to society of alcohol use. In Ireland the situation is made worse by the fact that a great deal of data is not collected. For this reason it is very difficult to estimate the overall cost to Irish society of alcohol related problems.

Some estimates may be made of the cost to the Exchequer of dealing with the consequences of alcohol abuse and the cost of alcohol related road accidents to society as a whole. This was largely the approach adopted by Walsh and Conniffe and McCoy. A figure for the cost of alcohol abuse to the Exchequer can be compared with the revenue raised from taxes on alcohol. This comparison is a useful input to government policy as taxation of alcohol is one of the factors that influence consumption.

Walsh in his study estimated the following elements of the costs of alcohol problems:

- (1) Road accidents
- (2) Direct health care costs
- (3) Cost of social services
- (4) Lower production due to alcohol related absences from work.

Walsh classified these as real resource costs and to these he added:

- (5) The value of transfer payments which are paid to those suffering the consequences of alcohol abuse including unemployment benefits, disability pay and pensions and
- (6) The loss of income and indirect taxes due to alcohol related illnesses and absences from work.

Of these figures the largest element was the unemployment benefits, disability benefits, pensions etc and the second largest was the lower production due to alcohol related absences. Some researchers have argued that the transfer payments element should not be included because transfer payments are a redistribution of existing output rather than a measure of output foregone. This argument is valid if the cost to society as a whole is being considered but if the cost to the Exchequer is being estimated this cost is relevant. Exchequer spending on transfer payments to people suffering the consequences of alcohol abuse could clearly be spent on other areas of government provision.

Of the figures above items 2, 3, 5 and 6 are borne by the state or taxpayer. Walsh pointed out that the losses due to road accidents were borne by the public at large, mainly as higher insurance premiums, but also more directly (and more unjustly) in uncompensated damage. In Walsh's view the lost output due to alcohol related absences from work was the most problematic figure. He argued that 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.

Walsh was unable to estimate most of the different categories of cost directly, as data were not available. He therefore had to make a number of heroic assumptions regarding for example, the proportions of expenditure on health care and on social welfare payments, which could be attributed to alcohol, related diseases or disabilities. It is worth considering the assumptions underlying Walsh's calculations for each category of cost.

## **8. Accident costs.**

In the case of accident costs Walsh used figures for the total cost of road accidents and assumed that the proportion of alcohol related accidents in Ireland was similar to that in the UK or the USA. More reliable Irish data on accident costs, including the proportion of such costs attributable to alcohol are available from a recent report prepared for government on the costs of road accidents and are used below.

## **9. Healthcare costs.**

Walsh argued that the impact of alcohol abuse on health care costs includes the cost of health services devoted to treating alcoholism and also the resources devoted to treating people for other illnesses that have been brought on by heavy drinking. As no figures were available for either category at the time when Walsh was undertaking his research, he used data on Voluntary Health Insurance Board claims arising from alcoholism/alcoholic psychosis and applied these to total hospital admissions for alcoholism. Many other illnesses such as liver cirrhosis, cancers, heart disease stroke and pneumonia are partially attributable to excess alcohol consumption. Many accidents other than road accidents and some suicides are also attributable to alcohol. Direct figures were not available to Walsh and for most of these categories are still not available. In “cost of illness” studies for other countries, the cost of direct alcohol induced illnesses (alcoholism, alcoholic psychosis) are identified and quantified. The proportions of other illnesses such as cancers and heart disease attributable to alcohol are calculated and included in the cost to the health care system of alcohol induced illnesses. No reliable estimates for the excess morbidity or mortality of alcoholics for alcohol related illnesses or accidents were available to Walsh. A wide range of estimates of the proportions of total health expenditure which arise from alcohol abuse are available from other countries and Walsh’s assumption that 3% of total spending on health was attributable to alcohol abuse was quite conservative.

It is not possible to cost the treatment of illnesses directly in Ireland at present though the Economic and Social Research Institute are analysing the Hospital Inpatient Enquiry at present and they hope to be able to calculate the cost of treating different categories of illness, in the absence of such figures there is no alternative to assuming that a proportion of total health spending arises from alcohol abuse.

Walsh assumed that a large proportion of disability claims in the category “mental, psychoneurotic and personality disorders” were made by alcoholics but accepted that many other disability claims resulted from disabilities to which alcohol was a contributory factor. He attributed one quarter of this figure to expenditure on patients diagnosed as suffering from alcoholism; the rest being an allowance for illnesses in which heavy drinking plays a part.

## **10. Social and Community costs.**

Walsh argues that social workers and 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. He apportioned 20 per cent of spending on social security and welfare (other than transfer payments) as the cost of dealing with alcohol related problems. He argued that this figure was sufficient also to cover the police and court costs arising from arrests for drunkenness and for driving while drunk where no accident occurred. (Police and court cost associated with accidents were included in the cost of accident calculations).

## **11. Loss of output**

The figures for road accidents in Walsh's study included an estimate of the loss of output due to injury and deaths attributable to alcohol related accidents. Walsh pointed out that estimating the costs of absence from work due to alcohol abuse raised more difficult issues, particularly the issue of who bears these costs. The self-employed and farmers who are unable to work due to alcohol abuse clearly bear the cost themselves. In the case of employees, if absences occur in a regular pattern (Mondays and after holidays) producers may adjust their production planning and staffing to take account of this problem. Only in a situation of very full employment could it be argued that output is lost due to these absences. If costs were imposed on the community, they would be in the form of higher cost of production due to the decreased efficiency of the labour force as a result of alcohol-related absences. Walsh attributed one third of absences from work to alcohol and converted this into increased labour costs and prices that caused a loss of output. Walsh regarded his calculation of the loss of output due to alcohol related problems as the most tentative of his figures. In 1993 the Irish Business and Employers Confederation using survey data calculated the value of output lost through alcohol related absences as £350 million.

## **12. Transfer payments**

Alcoholics and their dependants become entitled to transfer payments as a consequence of absence from work, sickness and death. The main payments are unemployment benefits and assistance, occupational injury benefits, disability benefits, retirement pensions, widows' pensions and invalidity pensions. These impose a financial burden on the state but not necessarily on society as a whole as transfer payments are a transfer of existing resources between individuals and not a sacrifice of potential output. The records of the benefits paid are not kept in a way which would make it possible to identify the numbers of recipients of these benefits who need them because of alcohol related problems- Walsh, on purely subjective grounds, attributed between 10 and 30 per cent of the various benefits to alcohol related problems. Discussions by the author with medical advisors to the Irish Department of Social, Community and Family Affairs suggest however that they are not overestimates. The state loses tax revenue as a result of the decrease in income and expenditure due to alcohol related illness and absence. Walsh arbitrarily set this loss of tax revenue at one third of his "guesstimate" of the value of the output lost due to absences.

Walsh's total figure of £63 million was considerably less than the tax revenue raised from alcohol but, as Walsh argues, many of the costs of alcohol use and abuse such as the pain and suffering imposed by alcoholics on themselves and others are practically impossible to estimate. These are precisely the costs "that motivate public opinion to endorse strict alcohol control policies". (Walsh, 1980")

Conniffe and McCoy in their study reviewed Walsh's figures and updated them for inflation. They faced the same data constraints as Walsh had faced and they used his assumptions about proportions of health expenditure, transfer payments attributable to alcohol etc. They found no reason to revise his conclusion that the costs of alcohol abuse to the state were about 50% of the value of the tax revenue raised from taxes on alcohol.

### **13.1 Estimates Of The Costs Of Alcohol Related Problems hi Ireland For 1999**

No further attempts have been made since the publication of Conniffe and McCoy's study to undertake a more comprehensive analysis of the costs to the Exchequer of alcohol abuse. The data available from which the cost of alcohol consumption might be estimated has not improved much since Walsh's study. The cost of accidents caused by alcohol consumption can be more accurately estimated using figures from government commissioned study of the cost of road accidents and a figure for loss of output due to alcohol abuse has been calculated from survey data by the Irish Business and employers confederation. More comprehensive data on alcohol related illnesses might emerge from the analysis of the Hospital Inpatient Enquiry by the Economic and Social Research Institute. Until more data are collected or existing data are analysed a tentative estimate of the costs of alcohol related problems in 1999 is derived below using a combination of Walsh's methodology and some additional data on costs of accidents and lost production

#### **13. 1 Healthcare costs**

A wide range of physical and mental illnesses can be at least partly attributed to excessive consumption of alcohol. Only in the case of a few diseases such as liver cirrhosis or alcoholic psychosis is it possible to attribute percentages of particular illnesses to alcohol consumption as the drinking habits of patients are rarely recorded. In the absence of figures for the cost of treating alcohol related illnesses, some proportion of total health spending on health care can be attributed to alcohol related illnesses. Walsh attributed 3% in his study but this figure seems very conservative and Walsh seems to have had in mind only diseases directly related to alcohol. Robson and Single in their review of studies of the cost of alcohol from a number of countries cited 7% of total health care costs as the lowest percentage attributable to alcohol related illnesses in the studies reviewed. One study put the figure as high as 22%. A figure of 7% would be a more realistic but conservative estimate for Ireland to take account of diseases both directly and indirectly related to alcohol. In 1999 7% of total current health expenditure was £220 million

### **13.3 Costs of road accidents.**

In their 1999 study of the cost of road accidents for the Department of the Environment, Bacon and Associates cite figures which suggest that 25% of all road accidents and 33% of fatal accidents are caused by alcohol, though figures from some police divisions suggest much higher figures. Bacon's figure for the total cost of road accidents is £795 million for the year 1989, a year chosen because it was the latest for which reliable insurance claims data was available. Allowing for inflation, this figure could be inflated by 16% to produce a figure of £994 million for 1997. As at least 25% of road accidents are alcohol related, it is reasonable to attribute 25% of Bacon's total costs or £248 million to alcohol related accidents.

### **13.4 Transfer Payments.**

Using Walsh's arbitrary but probably conservative proportions of expenditure on transfer payments gives the following figures for 1999:

20 per cent of invalidity pensions £50 million

20 per cent of unemployment assistance, occupational injuries benefit and disability benefit £151 million

10 per cent of unemployment benefit, widows' pensions and retirement pensions £117 million.

These figures give a total of transfer payments related to alcohol of £318 million.

### **13.5 Loss of output.**

The Irish Business and Employers Confederation (IBEC) using survey data from member firms estimated that in 1993 about one third of total absenteeism from work was alcohol related and that this cost Irish industry over £350 million in lost output. Adjusting this figure for inflation between 1993 and 1999 would give a figure of approximately £480 million in 1999. The IBEC figures only take account of the lost value of output of private sector firms. The output of large numbers of public sector employees is reduced due to alcohol but as the output of large areas of the public is not sold, the value of public sector output is usually estimated as the value of salaries paid. Taking a conservative 5% of the value of public sector wages, salaries and pensions as measure of lost public sector output due to excessive drinking gives a figure of £334 million.

Both direct taxes (mainly income tax) and indirect tax (mainly VAT) would be generated from the output lost through alcohol related absences from work. It is assumed that 25 per cent of the value of lost output would go to the government in direct and indirect taxes. This gives a figure of £184 million in taxes not collected on the lost output.



### 13.6 Cost of alcohol related crime

Walsh did not attempt to estimate the cost of alcohol related crime except insofar as such costs might be included in healthcare costs (cost of crime related injuries) or transfer payments (cost of disability payments etc to victims of alcohol related crime.) Dealing with alcohol related crime takes up a considerable amount of the time of the Irish police and the courts and many people are imprisoned as a result of alcohol related crime. 12% of all non-indictable offences are directly related to alcohol and are recorded as such but a reading of the court reports indicates that many indictable offences such as manslaughter, grievous bodily harm, sexual assault and rape are also alcohol related. A study of arrests in one police division found that alcohol was a factor in over 50 per cent of arrests for public order offences, offences against the person, road traffic offences, burglary and criminal damage. It would not be unrealistic therefore to attribute 10% of all crime to alcohol and to extrapolate from this figure that 10% of the total cost of the police services, the prison service and of court services can be attributed to alcohol. This figure for 1999 was £79 million.

### 13.7 Social and Community Costs

Walsh in his study included a figure to cover the costs of social work and administration, as distinct from transfer payments, which arise from excessive drinking. He apportioned 20% of total social welfare spending other than transfer payments to this figure which he considered adequate to also cover the cost of police work arising from dealing with alcohol related offences. As a separate figure for alcohol related crime is calculated above and most of the social work and administration costs come under the heading of health spending, a separate figure for these costs is not calculated here.

### 13.8 Total Costs of Alcohol related problems

The total costs of alcohol related problems are as follows:

#### *Real resource costs.*

(1) Healthcare costs	£220 million
(2) Costs of road accidents	£248 million
(3) Cost of alcohol related crime	£ 79 million
(4) Loss of output due to alcohol related absences from work	£814 million

#### *Transfer Payments:*

(5) Alcohol related transfer payments	£318 million
(6) Taxes not received on lost output	£184 million

<b>TOTAL</b>	<b>£1863 million</b>
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These figures suggest that the real resource costs of alcohol related problems to Irish society in 1999 were approximately £1.9 billion. Figures 1, 3, 5 and 6 are costs to the Exchequer and amount to £801 million. This is just over 60 per cent of the tax revenue raised from alcohol, compared to the figure of 50% estimated by Walsh. While some of the figures are based on arbitrary assumptions, they are in all cases very conservative assumptions and are below the comparable figures for countries where detailed figures are available for areas such as healthcare costs. They are a considerable underestimate in the sense that the costs of human suffering and distress that results from excessive drinking are not included.

The real resources costs of alcohol related problems as estimated above are 1.7% of Irish GDP in 1999. This can be compared with 0.4% for the UK, 1.4% for Australia, 1.7% for Japan, 1.9% for the USA and 2.7% as cited in Maynard, Godfrey and Harman who regard the UK figure as an underestimate and the figure for Canada as an overestimate.

### **13.8 Conclusions**

Alcohol related harm has become a major public issue in Ireland in recent years. Ireland now has the second highest level of alcohol consumption per capita in the European Union and is in the unhappy position of having the highest teenage alcohol consumption in the EU. Most alcohol consumed in Ireland is consumed in pubs and there is a worrying incidence of binge drinking. Hospital emergency rooms in the cities and towns are crowded at weekends with the victims of alcohol-related violence and accidents. Most of the victims and perpetrators of this alcohol related violence are young men who have been engaged in binge drinking.

Although the incidence of liver cirrhosis in Ireland is relatively low, it is increasing and excess alcohol consumption is a factor in the poor health status of many middle-aged and elderly Irish men. The binge drinking which is common in Ireland leads to more social harm and health damage than if the same quantity of alcohol was consumed in smaller quantities over a longer period.

The costs of alcohol abuse estimated above, while suffering the limitations of all such estimates, serve to remind policymakers of the value of resources used in dealing with the more obvious negative consequences of alcohol abuse. If an adequate money value could be put on the suffering and trauma of those who are the indirect victims of alcohol abuse, the figures might be at least twice as large and would dwarf the revenues raised from taxes on alcohol.

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