

# ECONOMIC COSTS OF ALCOHOL AND OTHER DRUGS IN THE WORKPLACE

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In the context of translating research and data into practice, economic data and associated research also needs to be considered. This paper examines the specific area of the economic costs of alcohol and other drugs in the workplace. It provides a case illustration of the ways particular types of data and information sources can be used to guide policy and practice decisions.

The paper examines the nature and effects of various economic impacts and considers problems in estimating the magnitude of their costs. Research on Australian costs is scarce but the available information is presented and reference is made to international studies which may inform Australian research. Each drug group (tobacco, alcohol and illicit) has distinct economic workplace and productivity implications. Tobacco research has concentrated particularly on tobacco related illness and, more recently, investigation into possible productivity losses associated with smoking breaks. Alcohol cost research addresses diminished productivity associated with workplace accidents, hangovers, absenteeism, and morbidity and mortality. Research into the workplace costs of illicit drugs includes mortality and morbidity, but also addresses issues relating to the illegality of consumption. There is an urgent need for more comprehensive research in this area. The paper concludes with an examination of possible policy implications of the research results.

**T**he need for estimates of the economic costs of substance abuse is well established and in most countries there are national economic policies for substance abuse, which differentiate them from most other commodities. Economic policy instruments such as tax are used in the regulation of these substances as well as for revenue and their abuse impacts on individuals, government and business. Cost estimates assist to target specific problems and policies. This paper specifically addresses costs which impact on the workplace, but cannot be totally separated from costs borne by individuals and government.

The economic impact of drug abuse on workplace productivity has three components:

1. Drug-attributable absenteeism associated with medical or hospital treatment

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2. Drug-attributable absenteeism not associated with medical or hospital treatment - the so-called “sickie”
3. Reduced on-the-job productivity.

In this paper, each of these separate components will be considered, types of cost will be identified, and the implications of where drug costs are borne will be discussed.

Our 1991 and 1996 studies estimated the value of (1) for all three drug types but were unable to evaluate the costs of (2) or (3). Since these studies were undertaken, some research results have been published for Australia and other countries on the workplace impact (in terms of increased absenteeism) of the consumption of alcohol and tobacco. While it is not possible or necessary to explore fully the exact research methodology in this context, nevertheless it is becoming possible to provide much more definitive data on the economic costs of drugs in the workplace to inform industry and government policy.

Costs which are borne by individuals, government and industry are all considered separately by economists. First if individual drug abusers are fully informed, rational and required to bear the total costs of their consumption, then economists consider that these are private costs, and therefore not subject to public policy and intervention. However, those conditions are rarely met.

Costs which are not private costs are social costs, paid for by us all collectively, either by other individuals (eg passive smoking) or by us all as taxpayers (eg health care) and by business (eg reduced productivity). Aggregate costs, that is total costs of drug abuse, are useful, especially for the “gee whiz” factor, but cannot inform policies or workplace strategies. This paper addresses the economic impact in the workplace of each of the categories of drugs.

It is important to note that there are many costs which can be identified, which we know are important, but at this stage of research, knowledge cannot be quantified and costed. It is also useful to consider the concept of the attributable fraction - how much of a condition is due to consumption of a drug. For example, foetal alcohol syndrome is totally attributable to alcohol, while lung cancer is only partially attributable to tobacco. This issue has been rigorously reviewed by epidemiologists in the production of aetiological fractions, which then form the basis of calculations of health care costs. The concept of the attributable fraction is also used in the legal system when courts and judges determine the relative degree of blame which is borne by separate parties and individuals. Economists also rely on the attributable fraction in order to estimate economic costs. To identify where those costs are borne, the calculation of the attributable fraction is essential.

A number of workplace studies, including some dating back to the 1950s, have found significant relationships between alcohol and work injuries. Economic issues include appropriate policies for identification of at-risk workers and cost-effective interventions. Consider a person who abuses alcohol, or is an alcoholic who is less productive at work or engages in high levels of absenteeism, as a result of his/her drinking. Is the resulting loss borne privately by the drinker or externally (in part, at least) by the employer or the rest of the community? Some economists have a tendency to suggest that employers will adjust wage rates downwards so that the drinker bears the costs of the reduced production (the costs are internalised). However, labour markets may not work in this way for a variety of reasons:

- employers may not recognise the problem drinking-associated costs which they are bearing
- wages may not be flexible downwards for institutional reasons. For example, Australia has a system of award rates and conditions which drastically reduces the scope of downward flexibility
- unfair dismissal legislation may make it difficult to dismiss less productive workers

- the drinkers may be employed in the public sector where wage flexibility may be much lower and dismissal procedures much more cumbersome
- the drinkers may be employed by companies which have organisational slack (that is, have not minimised costs for their chosen output levels) and which have the ability to pass on higher costs to their customers in the form of higher prices. Markets may not be sufficiently competitive to ensure that firms with organisational slack will ultimately fail.

To summarise, only where labour markets are functioning perfectly will alcohol-attributable production costs be totally private costs (assuming that the other necessary conditions are also met). This is a condition which is hard to envisage in the real world.

Single (1998) has produced a major study on substance abuse and the workplace in Canada, based in part on a review of studies of workplace substance abuse commissioned by the International Labour Office in 1998. Single reports the dimensions of the problems and concludes that there is relatively sparse systematic data regarding the magnitude, and therefore the costs, of substance abuse in the workplace. He notes studies indicating that impairment from alcohol and other drugs is a major cause of unemployment and absenteeism and that alcohol impairment is associated with a significant number of workplace accidents.

Tobacco is often excluded from such studies, but nevertheless there are significant costs borne by business because of tobacco consumption. The economic impact of tobacco in the workplace includes the diminished health status of workers, lost productivity due to smoking breaks and premature retirement and death. Quit programs for workers are demonstrably cost-effective, yet still not generally provided in the workplace. From an economic perspective, tobacco prevention is relatively more straightforward than preventive strategies for other drugs, as large numbers of smokers report themselves as actually wanting to quit. Bush and Wooden (1994; 1995) have shown for Australia, and Parrott, Godfrey and Raw (2000) for Scotland, that smoking reduces workplace productivity and costs are borne by workers and industry.

The economic impact of illicit drugs on workplace activity shares some of the characteristics of alcohol and tobacco - increased absenteeism, less healthy and productive workers - but there are also additional workplace costs which studies have identified. These include theft and workplace crime, high turnover costs (recruitment, training and loss of business experience) and lower workplace morale. Some of these factors can be identified, quantified and costed, but others are more difficult.

Some of the social costs borne by industry can be quantified from analysis of official data. Such identifiable costs include insurance premiums and insurance co-payments (available from company reports) and legal and court costs. Many of these social costs are shared with government, that is, with all taxpayers, particularly tax revenue forgone, health costs, and welfare payments. Estimates of lost productivity due to illness, absenteeism, injuries and poor work performance can be derived by comparing wages of alcohol and drug dependent workers with persons of the same age, gender and occupation.

There are very early examples of government and business recognising the national and economic importance of a healthy workforce. For example, Otto Von Bismarck, who was Chancellor of Germany from 1871 to 1890, introduced compulsory sickness insurance and workmen's compensation in order to ensure healthier workers, to increase productivity and provide a stronger army.

Analysis of where costs are borne is necessary from a public policy and industry perspective. Those costs which are quantifiable and non-quantifiable need to be identified. It may be possible to assess some costs which are presently non-quantifiable, with improved research results and more

targeted data collections. For example, changes to Australian Bureau of Statistics (ABS) data collections have improved calculations of the value of unpaid production.

Individuals and their families bear many of the costs of alcohol and drug abuse. One of the ways in which some of the costs can be measured is by estimating the value of unpaid work which is *not* undertaken because of alcohol and drug abuse. The Australian Bureau of Statistics Occasional Paper on unpaid work and the Australian economy (ABS, 1994) estimates the value of unpaid production, which is defined as household work and volunteer and community work. The total economy of a nation consists of both market and non-market sectors. The non-market sector uses, in an unpaid capacity, include considerable human resources for the production of goods and services which are directly consumed by households without going through the market. These activities, though productive, are in almost all cases not included in conventional national accounts statistics (see, for example, System of National Accounts, 1993). The ABS is actively considering expansion of the Australian national accounts to incorporate the value of unpaid work.

The definition of unpaid work used in the ABS study is as follows:

*“Household production consists of those unpaid activities which are carried on, by and for the members, which activities might be replaced by market goods or paid services, if circumstances such as income, market conditions and personal inclinations permit the service being delegated to someone outside the household group.”*

A household activity is considered as unpaid work if an economic unit other than the household itself could have supplied the latter with an equivalent service. The ABS estimates take account of domestic activities, childcare, purchasing of goods and services, and volunteer and community work. All are services, which will be lost by the community in the event of the severe sickness or death of the person supplying them, and so should be counted as a component of social cost. Social welfare payments to widows of persons who die as a result of substance abuse and persons disabled due to substance abuse are difficult to estimate, but nevertheless form part of abuse costs.

The ABS reports four possible valuation methodologies - individual function replacement cost, housekeeper replacement cost and opportunity cost (gross and net). Selection of the most appropriate method is dependent on the research question which is to be addressed. The approach of incorporating values of unpaid work in abuse cost estimates is one that was also recently adopted by the Bureau of Transport and Communication Economics in its estimates of road accident costs (Bureau of Transport and Communication Economics, 1992).

Costs of alcohol and drug abuse in the home are often also borne in the workplace. For example, child-minding and household tasks can impact on the workplace where a family member is abusing alcohol or illicit drugs. Workplace productivity may be reduced and other workplace costs, which may be incurred include increased absenteeism, sick leave and higher insurance premiums.

Further research needs to be undertaken on the cost-effectiveness of workplace intervention and prevention strategies. As industry demonstrates that it is increasingly willing to support and provide programs, economic evaluation of the relative effectiveness of alternate strategies is required to inform business decisions. Single (1998) concludes that, for Canada, the economic costs of lost productivity may be difficult to gauge, but they are clearly enormous. In Australia, the same conclusions are inevitable. Labour productivity, efficiency and profit are all reduced through alcohol and drug abuse. Reduction of the effects discussed in this paper is demonstrably for the economic benefit of individuals, industry and government.



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