MARKETS FOR ILLICIT DRUGS

by

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Markets for Illicit Drugs

1. Introduction

The purpose of this contribution is to examine the empirical evidence bearing upon models of rational addiction so as to illuminate the workings of illicit drugs markets in Australia. The focus is on the retail market though some reference is made to wholesale distribution. This is an exploration of some data on drug addicts in order to secure an understanding of the markets for illicit drugs. Furthermore, given the nature of the data, whatever the understanding emerging from this paper, it is largely about the demand and supply of heroin.

It is not the intention to explore issues bearing upon measures to legalise the use of illicit drugs or what is meant by legalisation or decriminalisation. These issues have been, and continue to be, explored in official and professional arenas. (13, 14, 18, 19) However, an understanding of how illicit drugs markets operate should help clarify contentious issues in the legalisation and related debates.

Prior to examining these matters a perspective on the economic significance of this market should be helpful. A recent study of the economic costs of drugs abuse shows that the illicit drug market brought tangible costs in 1988 of just over $1 billion. (3) Law enforcement against use of illicit drugs represented about 25 per cent of those tangible costs. As is evident from the data in Table 1 the illicit drugs market was the source of only 20 per cent of the measured tangible costs of drug abuse generally. This estimate may well exaggerate the relative size of the tangible costs generated in the illicit drugs market because the coverage of these costs for other drugs than illicit ones appears to be less comprehensive.

When intangible costs are taken into calculations, the relative importance of illicit drugs markets drops by half to 10 per cent. While reservations may be held about any series measuring intangibles, the estimates suggest caution when interpreting the economic significance of the illicit drugs market. Moreover the estimates shown in Table 1 are more likely to understate the economic costs of

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1 This paper is a revised and extended version of a paper under a similar title given at the Industrial Economics Conference in Canberra held between 16 and 18 July, 1992. I am grateful to Alison Harvie and Jack Towe for research assistance.
legal drugs, most notably alcohol and tobacco, owing to problems with assigning costs of supervision and enforcement, and disentangling their costs from similar costs arising elsewhere such as with traffic accidents. With prescription drugs there are no quantitative measures, even though medically induced addiction is not unfamiliar in the community.

Table 1: Economic Costs of Drug Abuse, 1988

<table>
<thead>
<tr>
<th></th>
<th>Alcohol</th>
<th>Tobacco</th>
<th>Illicit Drugs</th>
<th>All Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Tangible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Production Loss</td>
<td>801.2</td>
<td>-1518.6</td>
<td>246.7</td>
<td>-470.7</td>
</tr>
<tr>
<td>Health</td>
<td>581.0</td>
<td>699.6</td>
<td>29.9</td>
<td>1220.4</td>
</tr>
<tr>
<td>Consumption</td>
<td>1651.0</td>
<td>1722.2</td>
<td>707.8</td>
<td>3890.9</td>
</tr>
<tr>
<td>Total</td>
<td>3245.3</td>
<td>813.2</td>
<td>1042.4</td>
<td>5181.2</td>
</tr>
<tr>
<td>II: Intangible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2782.1</td>
<td>6028.3</td>
<td>308.8</td>
<td>9209.2</td>
</tr>
<tr>
<td>III: All Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6027.4</td>
<td>6811.5</td>
<td>1441.1</td>
<td>14390.4</td>
</tr>
<tr>
<td>%</td>
<td>41.9</td>
<td>47.5</td>
<td>10.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Main items only shown. The row and column items do not necessarily add up to totals.
Source: 3, p.89-90.

Some perspective on the scale of the economic costs of drug abuse to society is necessary. Gross domestic product in 1987-88 was $298,335 million. Thus the measured total costs of drug abuse generally were about 5 per cent of gross national output with the illicit drugs market a very small proportion.²

In the next section of the paper the rational addiction model is explained to provide the basis on which the understanding of an illicit drugs market is developed. The third section examines the evidence on future time perspectives of participants in illicit drugs markets. The fourth section then examines some available evidence on price, income and other influences bearing upon the behaviour of participants in the retail illicit drugs market. The final section attempts to bring together just how influences previously discussed constitute elements in illicit drugs markets.

2. The Market Model

The basis for establishing the nature of markets for illicit drugs is to be found in the wider context of theories of addiction, most notably the contributions by Becker and Murphy. (1,2) The central focus of their work is that addiction can be explained from basic assumptions about consumers seeking to maximise their perceived benefits from the consumption of goods and services. The distinction to be made between addictive items and others is that past consumption influences the benefits derived from the present consumption of addictive or potentially addictive items.³ The basis of this model is set out below being an explanation and not a critique.

The significance of the Becker-Murphy model lies in its implications for any conventional short term model of demand and supply. The model brings into a most sharp focus the implications of assumptions about rational behaviour. The dynamic implications illuminate the instability of any market equilibrium when participants are addicts.

(a) The Becker-Murphy Model

The model rests upon a utility function where one good contributes to utility not just in terms of current consumption of that good but also from past consumption. That past consumption is best thought of as a stock of consumer satisfactions akin to an accumulated "capital" of them. But this stock or "capital" accumulation of consumer satisfactions deteriorates over time so requiring replenishment from current consumption if it is to be maintained.

² In view of difficulties with measuring aspects of drug abuse and their associated costs, such comparisons as these are fraught with problems. For example the estimates in Table 1 do not cover the relationship between illicit drug taking and AIDS.

³ The embedding of analyses of demand for drugs, illicit and otherwise, in the wider context of addiction provides a general focus for examining demand. This approach is more secure than demand analyses not linked to special features of addiction.
Utility may be maximised subject to some budget constraint on spending. The utility function reflects a constant rate of time preference and defined length of life. Maximising requires a given real interest rate, earnings geared to utility generally and the stock of consumer satisfactions specifically, a stock of assets including the stock of consumer satisfactions, as an initial endowment and perfect capital markets. There is a price structure for the consumption goods.

Critical features of the analysis are the values associated with the rate of depreciation of the stock of consumer satisfactions and the rate of time preference. The higher the rate of depreciation the greater must be the present consumption of the good to maintain (and increase) this stock. A high rate of time preference values the present more than the future.

No less interesting is the relationship between earnings and addiction. The model ties earnings to utility which reflects the stock of consumption satisfaction associated with the addictive good. Hence capacity to earn may be impaired by this addiction, at least in some if not all activities.

The dynamic features of the Becker-Murphy model provide insights to the nature of addiction. These features are analysed in terms of steady state equilibrium conditions reflecting simplifications such as an infinite time horizon. The results are revealing of stable and unstable steady states. The stable steady state represents the high consumption of the addictive good associated with a substantial stock of consumption satisfaction requiring replenishment to compensate for depreciation.

The unstable one is the more interesting because it is most revealing of potential addiction. Many users may never reach that state so that the acquired stock of consumption satisfaction is insufficient to boost demand for the addictive good to the point of chronic need. The unstable steady state explodes to addiction when the past consumption of a good raises the marginal utility of present consumption; in effect there is strong adjacent complementarity in the utility.

The realisation of addiction depends on elements such as the rate of time preference so that the more heavily the future is discounted the more likely the realisation of addiction. Such discounting means that future costs of harmful additions are minimised. At the same time present benefits are weighted heavily in the assessment of the utility of present consumption levels. The result is to stimulate present demand for the addictive good. Similarly a high rate of depreciation on the stock of consumer satisfactions from the addictive good will foster high present demand.

Two further important features emerge from the Becker-Murphy analysis. First, the price effects distinguish between permanent and temporary changes in price. Temporary changes in price will have only minor impacts on current consumption because future costs and benefits will not be disturbed. However, the opposite is true for permanent changes and anticipated permanent changes.

The second is about the situation leading to addiction. In the terminology of the Becker-Murphy model the initial conditions generating the stock of consumption satisfactions provide the basis for potential addiction. These initial conditions set the basis for involvement in the use of addictive goods including illicit ones. There is no a priori reason for thinking that the establishment of these initial conditions is the same for each drug.

(b) Interpretation

The implications of the analysis are compelling. It offers an understanding of the basis of addiction. Because addictive goods and, most importantly, the demand for them rest upon past consumption of those goods then addiction is potentially present if an increase in consumption of the good now increases future consumption of that good. For that potentiality to be realised requires the further condition that past consumption conditions the benefits from present consumption, the more you have the more you want. In effect past and present consumption complement each other.

4 In the formal model there are two goods one of which relates to the stock of consumer satisfactions. The other is the price numerator against which the relative price of the first good is measured.
Encompassed in this analysis of addiction is the treatment of future prospects. The addictive consumer may be ever more myopic in perceptions of time preferencies of future benefits where that consumer is present oriented; a bird in hand is worth two in some (future and untracked) bush. Myopia is not essential to addiction but the dominance of present benefits and satisfactions against future costs of addiction is assured.

The major feature of this type of analysis is to stress the importance of the relationship between past and present consumption. When the complementarity between past and present is strong then addiction will be realised. This perspective may help explain the difference between the addicted user for whom more and more is required to bring present benefits and the controlled user who exhibits a stable rather than increasing demand for the good. This type of user may be best be understood in terms of the unstable steady state equilibrium. The controlled user may not reach the level of consumption associated with that state. But should that he achieved the controlled user may experience positive disturbances to consumption of the addictive good to bring chronic addiction. However, it is possible for a controlled user to be at a stable steady state equilibrium at low levels of consumption of the addictive good.

The links between the future and the present provide understanding of price effects in illicit drug markets. Changes in price and expected changes in future prices will shift the relative weighting of present and future benefits and costs. Just as part consumption of an addictive good bears upon present consumption, so a future price influences present demand. This implies that an anticipated increase in future prices of addictive goods lowers current consumption. Negative effects of anticipated future price rises on present consumption of addictive goods are a major way to distinguish rational addiction or rational habit formation from straightforward myopic behaviour.

Should myopia be dominant then price impacts may be small. But the evidence for that strong assumption is not overwhelming. Yet on the weakest interpretation of the price impacts arising with complementarity the effect would be to deter illicit drug use, most of all amongst controlled users.

The longer that future price changes are anticipated, the bigger is their effect on the current consumption of addictive goods. The reason is that the longer future price rises of an addictive good are anticipated, the greater is the reduction in the future benefits of consumption. Therefore, the smaller would be then stock of "capital", representing the experienced benefits of illicit drug use, carried into the present. Only in the case of the chronically myopic would this anticipated price change be minimised.

Complementarity between present and future consumption is larger for more addictive goods. Thus, permanent changes in prices of addictive goods might have large effects on their current consumption. Although much of the analysis implies that rational addicts respond more to price in the long than in the short run, they may also respond in the short run though, again, the chronically myopic least of all. The points to note here are:

i. As a future price increase of an addictive good reduces its current consumption, an increase only in its current price has little effect on current consumption compared with a permanent increase in its price; and,

ii. changes in price in the current period and further price changes in future periods will have the biggest impact on illicit drug use.

What establishes use of illicit drugs, or other ones for that matter, bears upon the initial conditions in the Becker-Murphy model. By some means events stimulate demand for addictive goods and services. Levels of income, temporary stresses stimulating the demand for addictive goods, and the level and path of prices establish the likelihood of becoming addicted. Peer group influences may play a major part as could socio-economic status.
3. Time Perspective

Central to the analysis of rational addiction is the impact of future time preferences on present consumption. For the addict past consumption practices in the use of an addictive item dominate the influence of the future on the present. For that consumer the future costs and benefits are seen imperfectly if not myopically.

Survey data permits some appraisal of illicit drugs market participants even if the bases of collection are from groups not necessarily representative of all consumers. (5, 6, 7) In so far as the distinction was made in the preceding section between addicted and controlled users, these surveys are sure to understimate the perceptions and standing of the latter group.  

One characteristic feature of the three surveys is the relatively low educational attainments of the participants with the large majority leaving school at 16 years of age or younger. Most would have gained a school certificate at best. The study of heroin users suggested a somewhat higher level of educational attainment than in the other two studies. (6, p. 29) This distinction rests upon attendance (and completion?) of studies at a technical college.

The same three surveys show that the ages at which illicit drugs were first and then regularly used were in the 'teens, the exception being cocaine and, in two of the three surveys, heroin in regular use. Alcohol and cannabis were the drugs first used in the early 'teens though cannabis was regularly used at a younger age than alcohol.

This set of results, from limited samples admittedly, allows some appraisal of the likely behaviour of market participants using illicit drugs. There are a number of studies of adolescents on the ways they view the future. As with the three surveys drawn upon in preceding paragraphs, caution must be exercised in the interpretation of the results of these studies. (16) Such studies are the reverse of analyses of longevity. (8)

Studies on future time perspectives of adolescents show marked variations in capacities to assess and judge possibilities for future developments of careers as well as likely experiences. Older adolescents and those with superior educational qualifications are the ones most likely to be able to project into the distant future. (9) At issue in this and other studies is the question of whether the younger adolescents who leave secondary schooling without formal qualifications do make the transition from the idiosyncratic and truncated perceptions of future events and prospects associated with that age group to the more mature perspectives of the educated older adolescents. This feature is important given the particular age and educational experiences of those identified with illicit drug use. While those who succeed at the secondary level and proceed to higher education do make this transition, the apparent evidence on the less educated is not clear. (10) One study of adolescent leaders does not enlighten this issue even though it reinforces the importance of education for the effective assessment of future possibilities. (12)

A comparative study of Australian and Singaporean youth offers some further insights on the grasp of future time perspectives. (15) Singaporeans are more optimistic about the future than Australian youth, having longer time frames as well. These differences were greater for Australian youth of low social status, a feature much less notable amongst Singaporean youth of different social standing.

The results treated in this section do suggest that participants in the illicit drug market are likely to have modest future-time perspectives. They are drawn from a segment of the population which has limited education and training. Experiences of the present and the immediate past are most important for dictating present and future actions and perceptions, hence there are grounds for judging that demand characteristics explicit in the Becker-Murphy model of rational addiction are to be found amongst participants in the illicit drugs market.

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7 In the 1984 survey three users admitted to being regular users but claimed not to be addicts. (5, p. 38, Table 20). This stance is suggestive of the functioning of a controlled user. Unfortunately the survey did not explore the characteristics of the three.
4. Market Evidence

In this section some features influencing the economic behaviour of drug users are examined. The information is derived from the surveys referred to in the preceding section. Hence it is not comprehensive by comparison with studies about participants in the United States.\(^{(17)}\) However, this Australian material does offer some insights.

(a) Price

The evidence on price behaviour in the illicit drugs market is scant. Where information is available, such as in the surveys to which reference has been made in the preceding sections, there is confusion as to what is being measured where the products are not standardised. Prices to consumers for seemingly standardised units do vary though the extent of the variability is greatest with the smaller quantities on offer. On the evidence of the 1985 study the pricing of heroin would appear to be highly sensitive to demand.\(^{(6},\text{Appendix C})\). However, this reflects a very limited set of observations.

Indirect evidence on price impacts may be found amongst the reasons for abstinence from drug use. Inability to pay for drugs is one explanation for abstinence though never the most prominent.\(^{(6},p.42\text{ and }7,p.38)\) But that evidence is indicative more of income elasticity of demand rather than for a price measure.

Other reported pricing behaviour suggests that the actual price paid may be less than the posted price for small transactions.\(^{(7},p.60)\) In this instance one cannot be sure as to whether or not this discounted price reflected the dealer's wish to retain regular customers. Such discounting may be the means by which retail dealers keep regular customers so as to lessen detection. Certainly, price was one of the three major factors, the others being reliability and quality of supplies, explaining reliance of consumers on a main supplier.\(^{(7},p.66)\)

On the basis of the material in two surveys, there is no convincing evidence of highly inelastic demand for illicit drugs, quite the contrary. While this may be strongest in the longer term setting, even in the short-term this appears to be true. On balance the Becker-Murphy model seems to have support from what evidence is available about Australian experiences, at least with heroin in the retail market.

(b) Income

The three surveys provide a basis for examining the income-earning activities of drug users, in these cases mainly heroin users. The evidence points to a weak performance with most unemployed or on some pension, mainly sickness benefit. That each survey is based upon a different group and not a population sample may account for disparities.\(^{8}\) In general there was a focus on heroin use though other drugs were used frequently by a majority in the surveys. The data shown in Table 2 does suggest that regular legal income earning activities are handicapped badly by drug consumption. That the 1987 survey reveals a markedly different pattern may be explained by it being a survey of user/dealers; heroin sales accounted for about 87 per cent of all income.

<table>
<thead>
<tr>
<th>Table 2: Employment Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Employed</td>
</tr>
<tr>
<td>Unemployed</td>
</tr>
<tr>
<td>Pension</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Sources:  
(a) 5,p.24;  
(b) 6,p.16;  
(c) 7,p.30.

Notes:  
(a) Survey based upon interviews of 225 prison inmates  
(b) Survey based upon interviews at 8 drug treatment centres  
(c) Survey based on interviews in King's Cross, Sydney.

Despite the substantial numbers, about 25 per cent in each, in the 1984 and 1985 surveys claiming to be in employment, the reported sources of income do not confirm that proportion especially in the earlier of the two. For the 1984 respondents property crime was the main source of income.\(^{(5},p.44)\) With the 1985 respondents, earnings from work and pensions provided less than 40 per cent of all income sources with sale of drugs accounting for more than any other gainful source as well as property crime and prostitution.

\(^{8}\) The 1984 survey distinguishes between users and non-users of heroin. The data shown refers to such users only.
On the basis of these three surveys, limited as they are in their sampling of populations, participation in sustained drug use is not compatible with regular income-earning activities other than an illegal pursuits. In terms of the Becker-Murphy model, utility maximisation is dominated by immediate consumption satisfactions.

However, this assessment reflects relationships between heroin addiction and income. Other illicit drugs may not reflect the same characteristics. Earnings may be enhanced by those drugs which sustain employment-related activities as may be the case with amphetamines. Addiction may sustain rather than impair employment and earnings at least in the shorter term.

(c) Supply

Production and supply of illicit drugs attracts people and the resources they can command because of the potential for rapid accumulation of wealth. At the very least producers and distributors maybe thought less risk averse than most participants in any economic activity. Discussions of the behaviour of suppliers are comprehensive in their appraisal of the connections between the relatively low probability of detection and the higher rewards for completing transactions whether as producer or distributor. (11) The rewards at these stages of the distribution network are much higher than for retail distribution being multiples of initial outlays. (7, pp.88-98)

The main element in this interpretation of reasons for supplying illicit drugs is the risk-return trade-off. The risk is quantifiable from the proportion of total trades successfully prosecuted. For some the risk might encompass removal from potentially lucrative future income earning activities, say the loss of a license for a pilot or with a lawyer being struck off the rolls, so that the longer term implications of detection and conviction are more onerous. For most the risk may be no more than a prison term and the attendant loss of income with detention.

When the retail market for illicit drugs is examined it is not surprising the great bulk of participants should come from relatively unskilled ranks in societies. Most have few or no resources prior to their involvement. The penalties of imprisonment and loss of income during detention are not severe when compared with continued employment at menial tasks or, as is more often the case, reliance on social welfare payments. In essence the opportunity cost of participation in illegal transactions is low. On the evidence available in the three surveys the income-earning activities portrayed in the preceding subsection do not hint at any acquisition of wealth. Rather the purpose is to provide resources to maintain addiction.

While poorly endowed individuals may secure wealth by participation in production, importing and wholesale distribution of illicit drugs, the much more favourable risk-return trade-off should foster participation by some with financial assets and skills able enough to organise larger-size business. The crux of participation in these spheres is the potential for rapid acquisition of wealth not attainable by legal means other than the lottery or similar officially-sanctioned game of chance.

So long as the probabilities of detection in the making and distributing of illicit drugs are relatively low, there will be willing newcomers available for recruitment, most of all with retail distribution. A major explanation for this phenomenon is the high proportion of retail distributors who are users of illicit drugs. Their trading is dictated partly by the need to earn income to sustain their addiction. (6, p.29 and 7, p.79) Price sensitivity in the retail market may be explained by the need to maintain earnings where the depreciation rate on the individual's stock of consumption satisfactions is high.

The user/dealer combination helps explain the dynamics of the illicit drug market, especially the heroin one. Sustaining the habit requires access to income not available from social welfare benefits alone or gainful employment. The imperative of addiction is to develop a market of sufficient size by recruiting new customers to cover the costs of own use.

(d) Initial Conditions

Insights to the circumstances which led to use of illicit drugs are available from two of the surveys on heroin use referred to in previous sections. Although the responses collected in the two surveys on the reasons for the initial use of heroin were not consistent in that the 1987 survey allowed more than one reason, the two dominant influences were first curiosity and secondly friends and peer group. The data is shown in Table 3 along with the reason for the regular use of heroin. Regular use was defined as use on three or more days per week.
It should be understood that this initial use of heroin came after use of other drugs such as alcohol and cannabis particularly, but also amphetamines and possibly others. This may help explain the high responses for initial use under the heading "curiosity". Boredom seems to account for little by way of initial use but more so for regular use. (The joining of curiosity and boredom in Table 3 reflects the classifications offered in one survey shown).

The extent of the influences arising from the respondents' social milieu may be understated by the data table 3. Subsidiary questions on the location and circumstances of initial use reveal the overwhelming impact of relations and friends. This is where most initial use took place and the company in which it was taken.

Table 3: Initial and Regular Use of Heroin: Responses

<table>
<thead>
<tr>
<th>Reasons</th>
<th>1985 Survey</th>
<th></th>
<th>1987 Survey</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Regular</td>
<td>Initial</td>
<td>Regular</td>
</tr>
<tr>
<td>1. Friends/Peer Group</td>
<td>17</td>
<td>23</td>
<td>41</td>
<td>17</td>
</tr>
<tr>
<td>2. Escape/Emotional</td>
<td>11</td>
<td>32</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>3. Curiosity/Boredom</td>
<td>85</td>
<td>1</td>
<td>105</td>
<td>10</td>
</tr>
<tr>
<td>4. Drug Availability</td>
<td>4</td>
<td>21</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>5. Liked</td>
<td>-</td>
<td>41</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>6. Other</td>
<td>15</td>
<td>8</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Total Responses</td>
<td>127</td>
<td>126</td>
<td>189</td>
<td>196</td>
</tr>
</tbody>
</table>

Source: As for Table 2

On this evidence the initial conditions are established in the social environment experienced by young people. The strength of those initial conditions, in the sense of establishing a stack of consumer satisfactions in terms of the Becker-Murphy model, would depend on the regularity of supply to some members of that environment. Other evidence suggests that friends, or a friend, continue as the main supplier, over 24 per cent of supplies came from a friend in the 1985 survey and 44 per cent in 1987 survey. (6, p.26 and 7, p.63)

5. Commentary

Empirical material available on Australian illicit drugs markets is limited. The three surveys relied upon in this appraisal draw upon specific groups of regular drug users. There is little information on the conduct and background of what has been referred to as the controlled and casual users of illicit drugs. Suffice it to note that these restrictions on access to information about participants in the illicit drugs market limit the scope for judging the significance of the Becker-Murphy model to the Australian situation.9

In terms of that model there are a number of points to be made about applicability in the Australian context:

(a) The basis for establishing the initial conditions of, amongst other matters, a stack of consumption satisfactions, as provided in the model, can be found in Australian experiences. There is evidence of a continuity of access to illicit drugs from the initial experiences with their use.

(b) The great bulk of the limited evidence brings out clearly how impaired are the income-earning opportunities from legal gainful employment amongst chronic users of illicit drugs. This feature suggests that:
   (i) the future time-rate of preference is very high, or
   (ii) these users are myopic in the present conduct unable to assess future costs of present consumption.

However, this evidence draws mainly on the activities of heroin users. There may well be different responses with other illicit drugs.

(c) The separate evidence on the time perspectives of adolescents and young adults does suggest some impairment of those subsequently recorded as regular users of illicit drugs. While the available data on such users is not conclusive in their idiosyncratic and truncated perceptions of future possibilities, there are grounds for judging a weak educational background to be an important explanation of circumstances fostering addiction. No less important would be their social milieu.

9 There is scope for a broader test of this model to the Australian situation. Should the Becker-Murphy model be found to apply to legal drugs markets and their participants, such as with alcohol and tobacco, then it would be reasonable to conclude that there is the same likelihood for similar applicability to the illicit drugs market.
Thus there are some grounds for thinking that the unstable steady state equilibrium helps explain the frequency of attendance at treatment centres as well as the lapses from completion of programmes in those centres. Amongst a significant proportion of drug users there are periods of chronic addiction followed by treatment. A serious question is whether or not the treatment in an abstinence phase or participation in a methadone scheme is anything more than a substitution.

This last point links illicit markets to provision of officially-sanctioned supplies. Substitution possibilities amongst different types of illicit drugs lead to a query about complementarities between illicit drugs markets and the legal provision of drugs. Such a shift in focus turns attention to supply rather than the explanation of demand explicit to the Becker-Murphy model.

Supporting evidence on the significance of the unstable equilibrium should be found in the patterns of participation showing regular users switching from heavy consumption of the addictive good followed by abstinence and then back to drug use. The most comprehensive survey bearing upon this issue is that for addicts in residential treatment in New South Wales over a two year period, 1985-86. There are 3939 clients in the survey though responses to some matters covered only 3462. Some 80 per cent left programmes before completion. Nearly 63 per cent left against advice. This high failure to complete rate may be explained partly by their presence in a treatment centre being the result of a court order or an impending court case. However, frequency of periods in a treatment centre is the characteristic of most clients. Nearly 75 per cent of the clients had been in treatment prior to the two year survey with 11 per cent stating that they had had treatment more than five times. Moreover 49 per cent said they had been admitted previously to the same agency. During the two year survey period there were two admissions per client though this average is deceptive; 62 per cent were admitted only once and just less than 1 per cent ten or more times.

The small group (3462) were asked for how long drugs had been a problem by which was meant disruptive to a normal lifestyle. Although 15 per cent could not estimate the time span some 65 per cent stated the period to be more than two years. The average period of problem drug use seems to lie between 5.25 and 6.25 years, though such estimates should be viewed cautiously.
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