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PAYING FOR HEROIN

**Estimating the financial cost of acquisitive crime
committed by dependent heroin users in England and Wales**

Institute for the Study of Drug Dependence

32-36 Loman Street, London SE1 0EE.

Report based on work carried out for the Central Drug Coordination Unit.

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EXECUTIVE SUMMARY

● This Report attempts to quantify the annual cost to society of acquisitive crime committed by dependent heroin users which finances their purchases of heroin; and the proportion of all acquisitive crime (by value) that this represents, in England and Wales.

● To do so we need to calculate values or ranges of values for the following:

- the quantity of heroin consumed by an individual user
- the cost of that heroin per user
- the number of dependent heroin users in England and Wales
- the percentage of heroin users' income which is derived from acquisitive crime
- the multiplier for the value of stolen property sold by the user.

● We utilise the following data and assumptions for England and Wales:

- on average each dependent heroin user (who also typically uses other drugs) consumes one third of a gram of heroin on 228 days of the year;
- the price of heroin purchased approximates to retail prices as collated by enforcement agencies;
- there are between twice and five times as many dependent heroin users than are notified to the Home Office as being addicted on heroin;
- the proportion of the cost of heroin which is financed by acquisitive crime falls within the range 16% to 48% (calculated from international studies);
- and that stolen property is sold for only a third of its value.

● On this basis, it is estimated that, in the early 1990s, dependent heroin users in England and Wales raised **between £58 million and £864 million** per annum from acquisitive crime in order to finance their heroin use - depending on (a) whether there are twice or five times as many dependent heroin users as notified, (b) whether their heroin costs them £50 or £100 per gram, and (c) whether 16% or 48% of their cash income comes from acquisitive crime.

● This is equivalent to **between 1% and 21%** of the annual cost of all acquisitive crime reported to the police (in 1992) in England and Wales. We can only have low to moderate confidence in the range of costs so estimated, due to inadequacies in the underlying data and also to the assumptions that have had to be made.

● A mid-range estimate would lie somewhere in between 1% and 21% but to cite any particular figure instead of the range would give a spurious impression of accuracy.

REPORT

INTRODUCTION

The structure of this Report is as follows:

- a statement of intent;
- an overview of the method employed;
- a critical commentary on previous estimates of heroin-related crime;
- calculation of the data ranges employed, based on the assumptions we have made;
- resulting estimates of the costs of heroin-related acquisitive crime;
- and finally, in an Appendix, an overview of the international studies from which our data is drawn.

The question asked

- What is the annual cost to society of acquisitive crime committed by dependent heroin users which finances their purchases of heroin; and what proportion of all acquisitive crime (by value) does this represent, in England and Wales?

The question of the criminality of drug users attracts public attention for a variety of reasons. Amongst these reasons may be:

- (i) a need to understand all aspects of drug problems, in order to steer social policy;
- (ii) a search for evidence of particular negative social impacts of illegal drug use, which might be addressed by a commitment to reducing demand and supply; and
- (iii) the perception that, if part of the increase in property crime in the last fifteen years can be attributed to an increase in drug use, then the police may be regarded as being more effective (against mounting odds) than would otherwise be perceived.

Taken together, this is a powerful set of reasons for enquiry.

Yet our ability to give a soundly-based answer to questions about drug-related acquisitive crime is bedeviled by incomplete research data and questionable or erroneous assumptions (to which we draw attention as the report proceeds).

The aim of this Report is to present not only an improved estimate (which we do in the form of a range) but also an improved understanding of the issues involved.

Overview of our method and the data

Before we go any further we will set out the minimum necessary information required if a calculation of the costs of heroin-related crime is to be made:

We calculate:

- A. The quantity of heroin consumed by a dependent user (0.33 grams on 228 days a year)
- B. The cost of that heroin per dependent user (between £3,762 and £7,524)
- C. The number of dependent heroin users (between 31,894 and 79,735)

These three Factors allow us to calculate:

- D. The total annual cost of heroin used by dependent users (between £119,9845,220 and £599,926,140)

We then introduce an important consideration:

- E. The percentage of heroin users' income which is derived from acquisitive crime (between 16% and 48%)

Which allows us to calculate:

- F. The total cost of heroin which is funded by income derived from acquisitive crime (between £19,197,635 and £287,964,540)

We then introduce:

- G. The multiplier for the value of stolen property sold by the user (three)

Which allows us to calculate:

- H. The cost to victims of acquisitive crime committed to purchase heroin (between £57,592,905 and £863,893,620)

We will use this nomenclature throughout the Report (Factors A to H).

Need for a realistic approach

The most recent and widely remarked upon British method is that of the Manchester Police, from whose work others have extrapolated the estimate that half the acquisitive crime by value in England and Wales is committed by notified addicts).¹

That calculation starts with an estimate of the annual cost of a heroin habit, assuming all notified addicts in England and Wales in 1992 used a gram of heroin a day every day throughout the year, at a cost of £80 per gram. Critically, it also assumes that all purchases of heroin are financed by acquisitive crime.

We consider that the assumptions made by the Manchester method result in an overestimation of the financial value of property/acquisitive crimes by dependent heroin users:

- It overestimates the levels of heroin consumption (overestimating the amount typically used) and hence overestimates the financial requirements of heroin users.
- It also makes no allowance for the fact that some - in all probability, most - heroin purchases are funded by means *other than* acquisitive crime.

On these grounds, we believe the Manchester method overestimates substantially the cost of heroin-related property crime. However, there is also a 'tilt' in the method that would result in a clear underestimate of acquisitive crimes, for the following reason:

- No allowance is made for the fact that more heroin dependent persons exist than are notified to the Home Office.

Had the authors factored in the assumption that there are twice as many dependent heroin users as notified to the Home Office, then their method would have accounted for all acquisitive crime by value in England and Wales. This potential result and its prima facie improbability was possibly perceived by the originators of the model. Yet such an assumption (x2) is at the lower end of the ratio conventionally employed. Had they factored in an assumption of x5 (sometimes taken as an upper estimate), then they would have accounted for 250% of the value of acquisitive crime.

Such difficulties should point to the need to re-assess the assumptions made in the model.

¹ Report by Greater Manchester Police Drugs/Crime Working Group, 1992, p.2-9; subsequently Drugs - the Need for Action, 1994, Labour Party, London. In the latter report, a figure for notified addicts is employed -- about a half of whom were notified as being dependent on heroin alone, and about a fifth on heroin and other drugs (in most cases methadone, but in some cases cocaine, ie in the context of polydrug use). Thus in their calculation, persons notified as dependent on drugs other than heroin are counted as heroin addicts. Contrast with our own approach, following pages.

In the more refined method which we set out below, an attempt has been made to accommodate these points (insofar as the available data and reasonable assumptions permit).

Quality of data

In spite of the public interest in the questions of criminality and of drugs, data from England and Wales is distinctly patchy in respect to the socio-economic lives of drug users.

In the absence of any reliable English data on Factor E, the proportion of heroin users' income which is derived from acquisitive crime, we turn to studies carried out in Scotland, other European settings and the United States.

In no case, however, do we classify the quality of data on the income and expenditure of dependent drug users as 'good'. Due to the relative scarcity of studies, problems of methodology, incomparability across different studies, and the passage of time, we can only have 'moderate' confidence in the data quality.

A: THE QUANTITY OF HEROIN CONSUMED BY A DEPENDENT HEROIN USER

Although we broadly rely on international research to calculate the proportion of heroin users' income which is derived from acquisitive crime, most of the other data can be found within England and Wales.

As regards frequency and amount of heroin consumed, available research³ (in which we have moderate confidence) suggests that the average dependent heroin user in Britain uses

0.33 grams of heroin a day for 228 days in a year.

That is, over a year, an average of a third of a gram on four days out of seven.

The international surveys studied in this Report (and commented on in detail in the Appendix) present us with some opportunity for comparison with this finding.

- In Scotland it was found that heavy users of opioids took them on 285 days a year.

- A Dutch study of Amsterdam heroin users found that in the week to which the interviews related, 27% of interviewees had taken between one and two grams of heroin and 29% more than two. This meant that on average those questioned took 2.3 grams per week.

Thus the available research suggests that the frequency of heroin use of the 'average' dependent user in England and Wales is slightly lower than that of the 'heavy' user in Scotland (which makes sense).

The research also suggests that the weekly heroin consumption in grams of the 'average' dependent user in England and Wales is slightly lower than that found in the Amsterdam sample. This may be because of greater availability of heroin in Amsterdam (ie, relative to the rest of the Netherlands, as well as relative to England and Wales).

● Therefore, on balance, we stick to the available English data on this point.

³ Hartnoll R., Lewis R. (1985) The Illicit Heroin Market in Britain: Towards a Preliminary Estimate of National Demand, quoted in 'Economic Aspects of the Illicit Drug Market and Drug Enforcement Policies in the United Kingdom', Home Office Research Study 95, 1988.

B: THE COST OF THAT HEROIN PER USER

Once again, given the variable nature of the data relating to the cost of heroin, we will stay with the available data for England and Wales, with which we also have moderate confidence.

Statistics gathered from enforcement agencies and the National Criminal Intelligence Service estimate the retail cost of a gram of heroin as varying between £50 and £100 in the early 1990s.⁴

Combining this figure with Factor A, we can calculate how much a dependent heroin user spends on their habit each year. This is estimated to lie within the range:

between £3762 and £7524 per year for a dependent heroin user.

This result can be compared with the international data:

- The Dutch study found that with the average cost of a gram of heroin standing at Dfl250 (c. \$150), each user consumed Dfl575 (c. \$345) of heroin *by value* per week. This corresponds roughly to the top end of the range we calculate for the average dependent heroin user in England and Wales.

- A German study found users spending 250DM (c. \$140) per day on drugs; drugs were not used every day and drug use was financed in the main without direct financial outlay.

- In the Scottish study, low level users of opioid drugs spent £220 per week on their general drug use, and heavy users £386 per week. This is rather more than our calculation for heroin purchases in England and Wales.

- And finally, a New York study found that irregular users spent \$986 per year on heroin, regular users \$4019 and daily users \$7601. These figures are considerably lower than our estimates for England and Wales.

● Thus our calculation for the 'average' dependent heroin user's annual expenditure on heroin in England and Wales roughly corresponds to (fits within) the range suggested by international studies.

⁴ From NCIS, cited in National Audit of Drug Misuse in Britain 1994, ISDD, in press.

C: THE NUMBER OF DEPENDENT HEROIN USERS

There is no direct measure of the number of dependent heroin users in England and Wales.⁴ This means that an estimate has to be derived indirectly. A conventional way of doing this is to apply a multiplier to the addict notification statistics. Doctors are required to 'notify' the Home Office when they attend a patient they consider to be addicted to certain drugs. The quality of this indicator depends on how many dependent users come forward for medical attention, and how diligent doctors are in complying with the Notification Regulations. One complication is that the choice of multiplier is somewhat arbitrary. A further complication is that the proportion of heroin users in the community who are seen by doctors will, in all probability, vary from time to time, so the 'multiplier' which is used may need to change over time. The nuances of this issue are beyond the scope of the present Report and in principle insoluble in the absence of improved direct measures of the number of dependent heroin users. For our present purposes, the number of dependent heroin users is calculated on the basis of multiplying the number of notified heroin addicts by either 2 or by 5, to give high and low estimates respectively.⁵ Unlike the figures applied in the Manchester estimate (noted above), the following figures relate solely to persons notified as dependent on heroin, alone or in combination with other notifiable drugs (such as methadone or cocaine). This is in accordance with other data we use, which also relate to heroin (alone or in combination with other drugs). Thus our eventual calculations apply to dependent persons of other drugs only insofar as they also are dependent on heroin.

Estimates of numbers of dependent heroin addicts in England & Wales⁶

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>Average</u>
Notified:	14,298	15,946	17,596	15,947
Applying multipliers:				
- if x2 notified:	28,596	31,892	35,192	31,894
- if x5 notified:	71,490	79,730	87,980	79,735

● If the average for these years is taken, it is estimated that the number of dependent heroin users in England and Wales in the early 1990s lies in a range whose lower limit is 31,894 and upper limit 79,735.

⁴ There is a measure of the numbers of persons in households who have ever taken heroin at some time in their lives, and in 1991 specifically (Self-reported drug misuse in England and Wales: main findings from the 1992 British Crime Survey, research Findings 7, by Mott J and Mirrlees-Black, C, Central Drug Prevention Unit, Home Office, free). But as a household survey this is not designed to give indications of regular use.

⁵ One British study which provides a method of estimating a ratio (this time that between notified addicts and drug injectors rather than between non-notified and notified addicts) is Frischer M. (1992) Estimated Prevalence of Injecting Drug Use in Glasgow, British Journal of Addiction, 87, p.235-43.

⁶ Source: Home Office (Annual) Statistics of drug addicts notified to the Home Office, Area tables, London: Government Statistical Service, tables A5 and A6.

D: THE TOTAL COST OF HEROIN

Pulling together Factors A, B and C, we are now able to calculate a range of values for Factor D, the total cost of heroin used:

$$\begin{aligned} \text{Total cost of heroin} &= \text{Cost per user} \times \text{number of users} \\ &= (\text{between } \pounds 3,762 \text{ and } \pounds 7,524) \times (\text{between } 31,894 \text{ and } 79,735) \end{aligned}$$

We can therefore estimate that the total annual cost of heroin consumed by dependent users in England and Wales lies in the range:

between £119,985,220 and £599,926,140.

E: THE PROPORTION OF DEPENDENT HEROIN USERS' INCOME WHICH IS DERIVED FROM ACQUISITIVE CRIME

The Manchester Police report ignored the existence of 'other means' of financing heroin consumption apart from through crime. These 'other means' can include legitimate income (benefits and wages), drug dealing (often an important income source) and prostitution (more commonly reported as a significant source of income by women), and as such, may be considerable sources of income.

Surveys carried out in England and Wales, Scotland and in several other countries confirm that dependent heroin users have this variety of income sources. We do not, however, intend to rely on the studies from England and Wales in this Report.⁷ This is because they do not refer to the proportions of drug users' income deriving from different sources, but rather to the proportion of persons who reported various income sources.

Anticipating data which we will later present in greater detail in the Appendix, the following table summarises results from studies carried out in Scotland, Holland, Germany and America, which suggest that the proportion of dependent heroin users' income deriving from acquisitive crime typically falls below 50% of their total income.⁸

Comparative international findings on income derived from acquisitive crime by dependent heroin/polydrug users, compared with their other sources of income

	<u>Acquisitive crime(%)</u>	<u>Drug dealing(%)</u>	<u>Legitimate income(%)</u>
German females	16	32	49
Netherlands	21	18	60
USA (Johnson) ⁹	29	24	26
Scotland	30	60	10
German males	31	36	31
USA (Deschenes)	48	28	24

Note: percentages do not all add up to 100 due to rounding. For dates, see studies.

⁷ Jarvis G., Parker H. (1989) Young Heroin Users and Crime, *British Journal of Criminology*, 29, p.175-85. Also, Stimson G. et al (1993) Patterns and Trends in Cocaine and Crack Use in England and Wales 1990-1992, The Centre for Research on Drugs and Health Behaviour, unpublished report. For methods and detail see these sources.

⁸ Hammersley R. et al (1989) The Relationship between Crime and Opioid Use, *British Journal of Addiction*, 84, p.1029-43; Grapendaal M. (1992) Cutting their Coat according to their Cloth: Economic Behaviour of Amsterdam Opiate Users, *International Journal of the Addictions*, 27(4), p.487-501; Kreuzer A. et al (1991) Perspectives on Drug Users, p.151-62, in Kube E. and Storzer H. eds., 'Police Research in the Federal Republic of Germany', Springer-Verlag, Berlin; Johnson B. et al (1985) Taking Care of Business: the Economics of Crime by Heroin Users, Lexington Books, Massachusetts; Deschenes E., Anglin M., Speckart G. (1991) Narcotics Addiction: Related Criminal Careers, Social and Economic Costs, *Journal of Drug Issues*, 21(2), p.383-411.

⁹ Does not add up to 100% due to the exclusion of an income source ('avoided expenditure') which is discussed over the page. This does not, however, affect the validity of this table.

In making estimates for England and Wales, we shall assume (with a lack of evidence to the contrary) that the situation also falls somewhere within this range:

**Between 16% and 48% of the total cash income
of dependent heroin users comes from acquisitive crime.**

This calculation rests on the working assumption that all cash income of dependent heroin users is used to purchase heroin, their living expenses being covered in other ways. The following section justifies this assumption.

Living expenses and 'avoided expenditures'

Dependent heroin users are better than non-users at obtaining 'favours' and hustling material resources from those around them, thereby avoiding some cash expenditures. Drug agency staff generally acknowledge this aspect of users' lives. The only English study we have found which touches on 'avoided expenditures' was carried out by Whynes et al in 1985/6.¹⁰ Interviewing 83 Class A drug users, it was found that all had debts outstanding and 85% had received 'drugs for favours' at some time.

Johnson et al's Harlem study suggests that around one fifth of the effective income of dependent heroin/polydrug users may be in the form of avoided expenditures - meaning that it is neither paid for in cash, nor taken illegally, but shared with or otherwise obtained from family or friends. This non-monetarised manner of getting resources is in addition to the income from state benefits, wages (if any), prostitution, acquisitive crime and/or drug dealing or assisting therewith (see Table 4 in Appendix).

In the Johnson study - which is the only one we have been able to identify that contains sufficient detail on these questions - the equivalent money value of avoided expenditures was approximately equal to the value of expenditures on shelter, food and other daily (non-drug) requirements. In other words, living expenses were covered through avoided expenditures.

We think it reasonable to assume that dependent heroin/polydrug users in Britain are as socially skilled as those elsewhere in matters of avoiding expenditures. In this report, we adopt the working assumption that living expenses of dependent heroin users in England and Wales are covered by avoided expenditures.

● This working assumption allows us to equate aggregate monetary income (all sources) with aggregate expenditure on heroin, and to suppose that the proportion of income derived from acquisitive crime is equal to the proportion of heroin expenditure funded by income from acquisitive crime.

¹⁰ Whynes D., Bean P., Giggs J., Wilkinson C. (1989) Managing Drug Use, British Journal of Addiction, 84, p.533-540.

F: THE TOTAL COST OF HEROIN FUNDED BY INCOME DERIVED FROM ACQUISITIVE CRIME

Recapping, we have calculated ranges for these five crucial variables:

- Factor A: The quantity of heroin consumed by a dependent user (0.33 grams on 228 days a year)
- Factor B: The cost of that heroin per user (range, £3762 to £7524)
- Factor C: The number of dependent users (averaged for the early 1990s) (range, 31,894 to 79,735)
- Factor D: The total cost of heroin consumed by dependent users per annum (range, £119,985,220 to £599,926,140)
- Factor E: The proportion of heroin users' income which is derived from acquisitive crime (range, 16% to 48%)

We are now able to calculate ranges for the final results.

The value for the proportion of total expenditure on heroin which is funded through acquisitive crime, is:

$$\begin{aligned} & (\text{range, } \pounds 119,985,220 \text{ to } \pounds 599,926,140) \times \frac{(\text{range, } 16 \text{ to } 48)}{100} \\ & = \pounds 19,197,635 \text{ to } \pounds 287,964,540 \end{aligned}$$

Thus the total cost of heroin funded by income derived from acquisitive crime, lies in the range:

£19 million to £288 million.

G: THE MULTIPLIER FOR THE VALUE OF STOLEN PROPERTY SOLD BY THE USER

It is conventional to assume that stolen goods (including items fraudulently obtained by using stolen credit cards) are sold for around a third of their value.¹¹

- In the face of no better method of estimation, we adopt this ratio.

H: THE COST TO VICTIMS OF ACQUISITIVE CRIME COMMITTED TO PURCHASE HEROIN

We are now able to calculate the cost to victims¹² of acquisitive crime committed by dependent heroin users in England and Wales, where the proceeds are used to purchase heroin, as follows:

$$\begin{aligned} \text{Cost to victims} &= \text{range, } \pounds 19,197,635 \text{ to } \pounds 287,964,540 \quad \times \quad 3 \\ &= \text{range, } \pounds 57,592,905 \text{ to } \pounds 863,893,620 \end{aligned}$$

Thus, the direct cost of acquisitive crime committed by dependent heroin users to finance their habits, is estimated to lie in the range:

£58 million to £864 million

- This is equivalent to between **1% and 21%** of the estimated cost of all acquisitive crime in England and Wales in 1992.¹³

Should the reader wish for a single point estimate, then this could be around 11%. Although the impression of precision given by any such number would be spurious, it would be better than using either the top or the bottom of the range alone.

¹¹ For the UK: Report by Greater Manchester Police Drugs/Crime Working Group, 1992, p.2-9. For the USA: New York State Division of Substance Abuse Services, 1983, Statewide comprehensive five-year plan 1984/85 through 1988/89, Albany, NY. Note however that the ratio may vary, depending on the crime (eg from 4 for burglary to 1 for welfare fraud, with the balance somewhere around 3, depending on the exact mix of acquisitive crimes); see Johnson et al, op cit, table 11-1, page 108-9.

¹² It has been pointed out that the replacement cost of the goods stolen is not the only cost to the victims. There are indirect costs, such as repairing any damage caused, but we do not attempt to quantify these here.

¹³ In 1992 the estimated cost of all acquisitive crime recorded by the police in England and Wales was £4019 million. See Home Office (1993) Criminal Statistics, England and Wales 1992, Tables 2.18 and 2.20, HMSO, London.

CONCLUSIONS

The primary interest of the client for this piece of research (the Central Drug Coordination Unit) focused upon the annual cost to society of acquisitive crime committed by dependent heroin users which finances their purchases of heroin; and the proportion of all acquisitive crime (by value) that this represents, in England and Wales.

- We find that a significant proportion (indeed the greater part) of the income of dependent heroin/polydrug users is raised by means other than acquisitive crime - that is to say, most is raised through drug dealing, licit income including prostitution, etc.
- We estimate that the costs of all types of acquisitive crimes in England and Wales by dependent heroin users fall in the broad range £58 million to £864 million - corresponding to 1% and 21% of the estimated annual (for the early 1990s) cost of all reported acquisitive crime in England and Wales.

Finally, the data used in this Report is at best of moderate quality.

- Given the legitimate cause for public concern, we therefore strongly recommend that improvement in the quality of information and research be regarded as an urgent priority.

APPENDIX

REVIEW OF INTERNATIONAL RESEARCH ON INCOME SOURCES OF HEROIN USERS

Surveys carried out in England and Wales, Scotland and in several other countries point to the fact that dependent heroin users (ie, persons who are moderate to heavy users of heroin and other drugs) have a variety of income sources - including legitimate means, drugs dealing (often an important source of income), prostitution (more commonly reported as a significant source of income by women) and/or acquisitive crime (ie, not only the latter).

As stated in the main Report, we do not intend to rely on the studies from England and Wales in this Report.¹⁴ This is because they do not report on the proportions of drug users' income deriving from different sources, but rather on the proportion of persons who reported various legal and illegal income sources.

It should be noted, however, that while the proportion of respondents who report acquisitive crime as an income source varies considerably between these studies (from 40% in Stimson et al, to 74% in Jarvis and Parker), it always falls well below 100%. It seems reasonable to suggest that amongst those mentioning acquisitive crime as a source of income, not all would rely on it equally heavily and regularly. So, if these studies are at all indicative of the wider picture, then they cast doubt on the notion that all dependent users rely for their finances exclusively upon acquisitive crime.

Due to insufficient detail in the available data from England and Wales, we will turn to Scottish, other European and north American data on the proportions of dependent heroin users' income which is derived from different sources. These studies from other countries concur that the proportion of dependent/heavy users' income raised from acquisitive crime is less than half their total income; in some cases it is well under a quarter of their total income. We will then use these data to describe a range of likelihood for the proportion of dependent heroin users' income which derives from acquisitive crime in England and Wales.

Given the problems inherent in such transposition of data, the quality and reliability must be regarded as low to moderate, at best. Even so, calculations on this basis must be regarded as *much more reliable* than any calculation done on the basis of the erroneous assumption that all dependent heroin users' income is derived from acquisitive crime.

¹⁴ Jarvis G., Parker H. (1989) Young Heroin Users and Crime, *British Journal of Criminology*, 29, p.175-85; Stimson G. et al (1993) Patterns and Trends in Cocaine and Crack Use in England and Wales 1990-1992, The Centre for Research on Drugs and Health Behaviour, unpublished report. For methods and detail see these sources.

Turning to Scottish and other studies of income data

As detailed above, a small number of studies in England and Wales have asked heroin addicts whether or not their addiction was funded by certain activities, such as drug dealing or acquisitive crime - producing quite widely varying results that seem to depend, at least in part, upon exactly what questions were asked. The main problem with these studies from our point of view is that they do not tell us what proportion of heroin addicts' income derives from crime - respondents were asked only about sources of income in general terms, with the resulting financial data being person- rather than source-specific (x% of addicts fund themselves by dealing, rather than x% of addict income derives from dealing). Due to this 'missing link' in the available English and Welsh research data, we have had to turn to data from other countries.

Fortunately, some studies conducted outside England and Wales go further than this, since they asked addicts to specify in what proportions their money comes from legal income, prostitution, drug dealing, other crime including acquisitive crimes, etc.

Of course, any attempt to transpose specific statistics directly from foreign studies into the English and Welsh situation must be strongly rejected. But, if the data from studies in a number of other countries seems fairly consistent insofar as it forms a coherent range - as we will show that it does - then the question becomes whether reasons can be adduced for saying the situation in England and Wales would be likely to fall far outside that range. With this in mind, we examine several studies which, when due account is taken of sampling issues (in particular, the gender of respondents), describe broadly comparable findings.

Scotland

A fairly recent Scottish study¹⁵ was based on drug users (mostly male) drawn partly from prison and partly from community sources, though little difference was found between them so they were combined.¹⁶ The following results refer to five categories of user: alcohol only; cannabis, with or without alcohol; miscellaneous illegal drugs other than opioids; 'moderate opioid use' (up to 273 days per year); and 'heavy opioid use' (more than 273 days), but both of the last two categories also took other drugs (polydrug use). See Table 1.

¹⁵ Hammersley R. et al (1989) The Relationship between Crime and Opioid Use, British Journal of Addiction, 84, p.1029-43.

¹⁶ It has been pointed out that samples drawn from treatment and from the community may differ as to reported criminal activity: 'Overall, a smaller proportion of addicts reported offending while receiving a prescription for opioids than before receiving one' (Bennett, T and Wright, R, 1986, The impact of prescribing on the crimes of opioid users, British Journal of Addiction, 81, page 265-273). Some of the studies examined below are of treatment samples and this may apply to them. On the other hand, as discussed in the German section, individuals in treatment may be more 'criminal' (having more criminal convictions) than those in the community.

Table 1. Some Scottish data:

Sources of income, £ per week, reported by users of -

	Alcohol	Cannabis	Misc. drugs	Moderate opioid	Heavy opioid	Mod + heavy opioid
All income	113	213	184	808	934	(100%)
<u>Of which:</u>						
Legit.	70	51	71	80 (10%)	98 (10%)	(10%)
Dealing	7	0	8	556 (69%)	471 (50%)	(60%)
Other crime	36	162	105	172 (21%)	365 (39%)	(30%)

Source: Table 1 and text of Hammersley et al p 1037.

Notes: Sample is overwhelmingly male.

Prostitution as a source of income not discussed by the authors.

The percentage figures within brackets refer to income as a proportion of all stated income.

It is striking that drug dealing became so important for opioid users, whose high involvement in dealing is more significant in terms of income-generation than other crimes. As far as variation between user-types is concerned, the authors remark (p.1038):

'Essentially, higher level drug users took more drugs and committed more crimes than did lower level users. However, things were not quite this simple: There was no relationship between drug level and delinquency and fraud, and moderate opioid users did not steal significantly more than did miscellaneous drug users or cannabis users... However, heavy opioid use was associated with increased criminality.'

Indeed, the 'heavy opioid users' in the Scottish study reported nearly twice the rate of criminality (ie acquisitive crimes) compared with the 'moderate opioid users' (although the latter were at least as active in terms of drug dealing). On this basis, income generated from acquisitive crimes by male opioid users (ie users of heroin and other drugs) vary within the range 20-40% of all their income. This is certainly not a picture of property crime being the main source of income, let alone the sole source as might popularly be supposed.

Germany

In Germany, the well known work of Kreuzer suggests that less than a third of the money needed by German addicts is raised through acquisitive crimes, although the picture differs according to gender.¹⁷ Table 2 summarises Kreuzer's data for a sample of 100 Germans who had an average of 8 years use of 'hard drugs' and were interviewed during their first few weeks in treatment. Of their income when using drugs, approximately a third was reported to be raised by drug dealing, with men raising proportionately slightly more by this means than women. Around a fifth of the

¹⁷ Kreuzer A. et al (1991) Perspectives on Drug Users, p.151-62, in Kube E. and Storzer H. eds., 'Police Research in the Federal Republic of Germany', Springer-Verlag, Berlin.

money came from legal means, which includes employment, again with minor gender differences.

There was a considerable difference in relation to prostitution, with women financing a little over a quarter of their drug addiction this way, but men very little (in line with other studies, and possibly reflecting some under-reporting by the men, amongst whom selling sex may be more stigmatised).

When it comes to 'other crimes', including acquisitive crimes, there is a pronounced difference between the sexes, with men reporting twice as much reliance on this way of financing drug use (39.3%, against 16.0% claimed by women, 30.8% both sexes combined). This seems to be related to women's greater reliance on prostitution.

Table 2. Some German data:

Means of financing drug use in 1988 (in % of drug expenditures)

	Men	Women	Sample
Legal	21.5	17.1	20.2
Prostitution (illegal)	1.7	27.7	11.2
Drug dealing	37.5	32.4	35.6
Other crimes	39.3	16.0	30.8

Note: Does not add up to 100% because some details are missing.

Source: Reproduced without amendment from table 2, Kreuzer.

Uniquely amongst the studies we report here (ie, not in the Scottish, Dutch or US studies also cited), the percentages reported in relation to German drug users refer to means of financing drug purchases (ie, excluding their financing of other living expenses). This means that their living expenses such as housing, food and clothing were met by other sources not reported by the authors. Insofar as a majority of the German sample were unemployed and qualified for social support, they would have had their accommodation costs (if any) paid direct by voucher, rather than have that cash go through their hands. Some would have had cashable state social support, reckoned to underpin a minimum standard in matters such as food (and may have spent it on that).

As a treatment-based sample - and in a country such as Germany in which entry into treatment is most commonly achieved as a form of diversion from a prison sentence - Kreuzer's respondents were probably heavier users and more criminal in behaviour than the average German user in the community. It has been suggested that his findings might need to be 'corrected downwards' to make it more comparable with samples drawn from the community in other countries. Be that as it may, the German data indicates a range similar to, but slightly broader than, that suggested by the Scottish study: roughly 16-39% of the income of moderate-heavy heroin/opioid users ('addicts') may come from acquisitive crime, women being at the bottom of this scale and men at the top. This gender difference seems likely to be reflected in general terms in England and Wales. It suggests that we should bear gender in mind when considering how this and other international data may relate to the situation in England and Wales.

Netherlands

A figure well towards the lower end of the German range (16-39%) is suggested by the work of Martin Grapendaal in Amsterdam in the late 1980s.¹⁸ He studied 150 opiate users (105 methadone clients and 45 non-users of methadone), and felt that the sample was representative of Amsterdam's drug-using population, although it is not specified what proportions were male or female (a multiple regression analysis found that men obtained more money from criminality than women - a finding echoed elsewhere). As for aggregate income, the group made \$72,400 a week between the 150 persons, \$15,500 of which derived from property crime - around a fifth of the total.

Table 3. Some Dutch data:

Income sources compared

Welfare	28%
Criminality	21%
Prostitution (legal in Netherlands)	21%
Drugs market	18%
Work	3%
Odd jobs and 'other'	8%

Note: does not add up to 100% due to rounding.

Source: Tables 6 and 7, Grapendaal p.496.

United States

In the United States, well known work carried out on community-based heroin users in Harlem suggested that frequency of heroin use varied, typically occurring on several days of the week, but not every day¹⁹. On average, users reported that around a fifth of their total income came from legitimate sources; around a quarter from drug dealing; around another fifth from friends and family and what we have called 'avoided expenditures'; and between a fifth and a third from acquisitive crime. See Table 4 below.

The Johnson et al study is the only one reviewed in which 'avoided expenditures' is quantified. This comes to 21% of all reported income - quite a notable figure, being equivalent and additional to the percentage of total income obtained from licit employment. The category of avoided expenditure corresponds to passing references in British research to support 'in kind' from partners, family or friends as a means of reducing everyday living expenses.²⁰ Johnson's attention to avoided expenditures, and its thoroughness in other respects, mark it out for special consideration. Its report

¹⁸ Grapendaal M. (1992) Cutting their Coat according to their Cloth: Economic Behaviour of Amsterdam Opiate Users, *International Journal of the Addictions*, 27(4), p.487-501.

¹⁹ Johnson B. et al (1985) *Taking Care of Business: the Economics of Crime by Heroin Users*, Lexington Books, Massachusetts.

²⁰ See Whynes D. et al (1989) *op. cit.*

that 29% of all income of dependent heroin users (sample average) derives from acquisitive crime falls almost exactly in the middle of the range which we ourselves adopt.

Table 4. Most detailed available U.S data:
Total annualised income from all sources in percentage terms: Harlem, N.Y, 1978-79

	Heroin User Group		Sample	
	Irregular \$%	Regular \$%	Daily \$%	average \$%
NON-DRUG CRIMES:				
Cash income from non-drug crime (robbery, theft, burglary, other) ¹	19	30	32	29
Pimping and prostitution (illegal in US)	7	5	4	5
DRUG CRIMES:				
Cash income from dealing etc (sales, assisting, rip-offs...)	14	8	12	11
Drugs obtained from dealing etc: ² value of:	5	12	17	13
NON-CRIMES:				
Licit income(work, public support etc:see text)	34	23	14	21
Avoided expenditure (gifts, meals shelter, etc.)	21	22	21	21
All above as % of TOTAL INCOME	\$11399	\$16547	\$23839	\$17234

Source: Johnson et al, 1985, adapted from Table 10-1, p.99.

Notes: 1. Includes shoplifting (resale) and shoplifting (own use). Although no dollar income was obtained from the latter, it is still an acquisitive crime. 2. Dollar value of drugs sold, stolen, or 'steered, touted, & copped'.

Finally, we will look at another American study - one which suggests a higher proportion of criminal income than is suggested by the other US and EU studies²¹. Between 1978 and 1980, 279 male heroin addicts admitted to methadone maintenance programmes in Southern California were interviewed by a team headed by Deschenes, Anglin and Speckart. 160 were Chicano and 119 white and the findings are similar for both. The income results for the drug-using periods of respondents' lives are recorded in Table 5.

Table 5. Less comprehensive American data:

	<u>Chicano</u> <u>income</u>	<u>% of total</u>	<u>White</u> <u>income</u>	<u>% of total</u>
Crime	636	48	807	48
Drug dealing	348	27	490	29
Employment	238	18	298	18
Welfare	90	7	69	4
TOTAL	1312		1664	

Note: percentages do not add up to 100 due to rounding.
Source: Table 4 in Deschenes et al, p.397.

In the Deschenes et al study, almost half of each individual addict's income (whether they are white or not), was reported as effectively deriving from property crime. When compared to the individual highs from Scotland and Germany of 39% and the figure from the Netherlands of 21%, this is a statistic rather higher than anything encountered in Europe. It is also higher than the daily heroin users in the Harlem sample of Johnson et al.

In the light of the research findings from Scotland and elsewhere, we now turn to the question of what proportion of total income of dependent heroin users might be derived from acquisitive crime in England and Wales.

²¹ Deschenes E., Anglin M., Speckart G. (1991) Narcotics Addiction: Related Criminal Careers, Social and Economic Costs, *Journal of Drug Issues*, 21(2), p.383-411.

Summary and discussion of survey findings

Table 6 summarises findings from Tables 1 to 5 above:

Table 6. Comparative international findings on income derived from acquisitive crime by dependent heroin/polydrug users as a proportion (%) of their total income

<u>Country</u>	<u>Author</u>	<u>Sample</u>	<u>% from acquisitive crime:</u>
1. Scotland	Hammersley	Male heavy users	39
2. Scotland	ditto	Male moderate users	21
3. Germany	Kreuzer	Male addicts	39
4. Germany	ditto	Female addicts	16
5. Netherlands	Grapendaal	Opioid users	21
6. U.S.A	Johnson et al	Male heroin users, irregular	19
7. U.S.A	ditto	ditto, regular	30
8. U.S.A	ditto	ditto, daily	32
9. U.S.A	Deschenes	Chicano/white male addicts	48
10. England/Wales:	none published	giving income source breakdowns	

A readily drawn conclusion, in view of the dispersal of percentages shown in Table 6, is that it would be extremely hazardous to adopt any single-point estimate for the proportion of dependent heroin users' income that is derived from acquisitive crime.

In other words, as in other estimates made in this Report, we look for a range. There are two ways a range could be estimated:

- by taking the highest and lowest available percentages from Table 6, or
- by examining the data to see if a middle range within that span can be adopted.

The following section of this Appendix explores these alternatives and puts forward reasons for taking the full range.

Reasons for adopting the full range

Table 7 presents the various studies' findings on acquisitive crime as a percentage of all income, alongside the other sources of income (summarised from Tables 1 to 5 above). Also in Table 7, the studies have been bunched together into a middle range of populations sampled, and the two 'extremes'.

If we lay aside - for one moment - these two extremes (deriving from German females and Californian males), then we find quite a correspondence of findings on income from acquisitive crimes as a percentage of all income. This correspondence is *in spite of* considerable variation in the percentage of income which users report from other sources (drug dealing in different countries 18-59%; and legitimate income 10% in Scotland, 60% in the Netherlands).

Table 7. Comparative international findings on income derived from acquisitive crime by dependent heroin/polydrug users, compared with their other sources of income, as percentages

	<u>Acquisitive crimes</u>	<u>Drug dealing</u>	<u>Legitimate income</u>	<u>Avoided expenditure</u>
MID RANGE DATA:				
Scotland*	30	60	10	Not asked
German males	31	36	31	Not asked
Netherlands	31	18	60	Not asked
USA (Johnson)*	29	24	26	21%
HIGHER OR LOWER:				
German females	16	32	49	Not asked
USA (Deschenes)*	48	28	24	Not asked

* indicates percentage averaged across sub-samples.

The lowest estimate in the table above rests on a female (German) sub-sample. Possible reasons for excluding it from further consideration include the fact that women form a minority (though - at between 25% and 33% - a sizeable one) amongst dependent heroin users in England and Wales. From this point of view, adopting a percentage as low as 16% to describe the proportion of average (male and female) income deriving from acquisitive crime would be unmerited.

But, against this, it could be said that male earnings from prostitution are probably underestimated in all the male samples, resulting in bias upwards of the percentage of their incomes said to come from acquisitive crime. Furthermore, all the studies apart from Johnson et al underestimate so-called avoidable expenses, again resulting in a probable upward bias in the proportion of acquisitive crime reported by both males and females. On balance, therefore, we adopt the lowest (German female) acquisitive crime percentage as the bottom of our range.

The highest estimate in the tables above derives from one of the US studies.

One possible reason for passing over this study is its failure to ask about (male) prostitution income - which may or may not have been significant in California in the late 1970s.

But there are grounds to suspect that not only this study, but all the studies with the exception of that by Johnson et al, overestimate the proportion of acquisitive crime income - since they neglect to enquire about avoided expenditures.

Scrutiny of these other surveys, and of the options they presented for questioning/reporting, suggests that the more detailed the enquiry on these matters, the higher the proportion reported.

Thus:

- the Scottish and German authors identify only one category, 'legitimate' (and quantify it at around 20% of all income);
- the Californian study, which identified two categories, 'employment' and 'welfare' (coming out at 24% of the total);
- the Dutch study identifies four legitimate categories: welfare, work, odd jobs (may imply overlap with Johnson's avoided expenditure) and 'other' (leaving a legitimate income total of 39%).

Whereas Johnson et al noted ten sub-categories of non-criminal income, plus three others (pp 89 and 99, excluding illegalities), totalling 42%.

Table 8. Yields of studies on legitimate income and avoided expenditure

	<u>% legitimate</u> <u>income</u>	<u>% avoided</u> <u>expenditure</u>	<u>Legit + Avoid</u>
Scottish	17%	Not enquired	?
German	20%	Not enquired	?
California	24%	Not enquired	?
Netherlands	39%	Not enquired	?
Harlem	21%	21%	42%

Sources: as above.

Summarising, the studies in Scotland, Germany and the Netherlands enquired about fewer categories of legitimate income and apparently not at all about avoided expenditures. From this, it seems reasonable to suggest that, had the Californian study and European studies enquired in greater detail into the possible sources of legitimate income and avoided expenditure, then they would have elicited more information - especially on avoided expenditures. In other words, the relatively simplistic methods of enquiry of most of the studies probably has had an effect of artificially elevating the percentage of income attributable to illegal activities.

This would be one reason for arguing that our 'top of range' study in terms of the percentage of income raised from acquisitive crime income (California) should be discounted.

However, despite the arguments advanced here, they remain unproven (awaiting future research). We therefore adopt the following wide range of likelihood, within which the situation in England and Wales may be expected to fall:

Proportion of dependent heroin users' income which is derived from acquisitive crime falls in the range 16%-48%

- This range is entered into the calculations in the main report above.

ENDS