AN ECONOMIC PERSPECTIVE ON DRUG PROHIBITION

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This original essay by Ivan Harkins addresses an issue that many would find controversial – that of legalising certain illicit substances. The author suggests approaching the problem from the economic perspective. He examines the history of past experiences of drug decriminalisation and rigorously sets out the background for a proposed future cost-benefit analysis and further policy development.

"Prohibition goes beyond the bounds of reason in that it attempts to control a man's appetite by legislation and makes crimes out of things that are not crimes. A prohibition law strikes a blow at the very principles upon which our government was founded"

Abraham Lincoln. (The Quote Cache, 2003).

Introduction

The debate on the legal status of drugs has a quite extensive and often inconsistent history. While all sides acknowledge the destructive societal effects of drug use, the sources of these effects are disputed. The purpose of this essay is to discuss the pros and cons of legalising certain illicit substances.

Within the literature, there is a lack of any well-structured argument defending prohibition. One such paper stemmed from a meeting of the AER chaired by Irving Fisher (1927). Basing their argument around the increased savings and productivity of workers perceived during prohibition of alcohol, they declared the evils of alcohol to be detrimental to society. Their discussion was neither empirically comprehensive nor theoretically solid. As one speaker mentioned the proposed increased in savings was more attributable to changes in the banking system than to any change in the drinking patterns of consumers.

This essay will begin by outlining a brief history of prohibition in the US where there is a more widespread literature available. From there it will examine the theory surrounding prohibition and drugs. Then the discussion proceeds to talk

about the two 'natural experiments' of note in the prohibition debate: the prohibition of alcohol in the 1920s and decriminalisation of marijuana during the 1970s.

History

In the late 19th and early 20th century drug use was widespread. Opiates, cocaine and marijuana were part of a recreational life as well as part of many patent medicines and herbal remedies. Indeed in 1619, Virginia assembly passed the first law concerning cannabis, requiring every household to grow it; the fibres were legally used for sails and rigging. Marijuana use is believed to date back many centuries. The Chinese dynasties reportedly used what they called "ma", as part of a mixture for anaesthetic (Schlosser, 2003).

Public opinion on drugs, in the US, changed early in the twentieth century. With a rising tide of immigrants from China and Mexico, a strong racial sentiment altered attitudes toward drug use: marijuana became associated with the Mexican, as did opiate use with the Chinese. As movements began to restrict the influx of migrants, so also began a new stance against drugs.

The American Pharmaceutical Association declared: "if the 'Chinaman' cannot get along without his 'dope,' we can get along without him." In 1909, the United States' international war on drugs began when California prohibited the importation of smokeable opium (Drug Policy Alliance, 2003).

Similarly, bigotry and suspicions of Mexicans and later black jazz musicians were exploited to ban the use of marijuana. It was "depicted as an alien intrusion into American life, capable of transforming healthy teenagers into sex-crazed maniacs" (Schlosser, 2003). In 1914, a law was passed in the State of Texas banning the possession of marijuana and by 1931 twenty-nine states had followed suit. In 1937, the US Congress endorsed the Marijuana Tax Act, which criminalised the possession of cannabis throughout the United States.[1]

By the 1960s, the political culture was changing. There was a growing movement of marijuana users. Among college students and 'hippies' the 'weed' was gaining popularity. As a result of this shifting culture:

[1] "The first victim of this war was neither a foreign drug lord nor an organised crime boss, but rather a 58 year old farmer named Samuel R. Caldwell. [He] was apprehended three days after the law was passed selling a couple of joints to his buddy Moses Baca. These guys lived in Denver, Colorado and probably did not have C-Span [an American television station] to let them know of the newest laws on Capitol Hill. Mr. Baca received 18 months in Leavenworth Penitentiary, a maximum-security unit infamous for its history of violent offenders. Mr. Caldwell was fined $1000 and also sent to Leavenworth where he served out a four-year sentence. He died less than a year after his release" (Samuel Caldwell's Revenge, 2003).

> "in 1972 the National Commission on Marijuana and Drug Abuse recommended that the country 'decriminalise' the use and possession of a small amount of marijuana, following that recommendation, 11 states repealed the criminal prosecution of marijuana users, replacing it with citations and small fines" (Lee, 1993).

Cannabis was re-criminalised again in 1984 under Ronald Reagan after political pressure from parents associations and other political influences. It has remained criminalised, with increasing penalties.

In the modern day, drugs are playing a growing role within the media. In film and music industries drug use is being romanticised. There is an increasing need in today's context to 'de-mythologise' and separate the real economic and societal effects of drugs from those caused by prohibition.

Theory

The need for regulation in a market, according to economic theory, is driven by imperfections. There are two primary imperfections that exist in the drugs market. The first of these is informational asymmetries, for example, general lack of knowledge about the longer-term effects of drugs (perhaps explaining observed 'myopia') and the unknown quality of an individual suppliers quality of product. A second imperfection arises from externalities. This includes negative externalities such as, increased health costs or escalated violence. Is 'blanket-prohibition' of drugs, the best policy-solution to these market imperfections?

The discussion will look at each of the factors within the debate on 'prohibition of drugs'. The choice of whether drugs should be legal or illegal is ideal for study in an economic context. There will be a review of the literature concerning the 'natural experiments' mentioned at the outset, and these arguments will be developed below.

Level of Consumption

The first factor is the possible change in consumption by new and existing users. Some argue, intuitively, that a legal market will result in a higher demand because the ascribed price[2] of drugs will have gone down. Others refer to such 'natural experiments' as the alcohol prohibition where demand did not respond dramatically in the long run, to either prohibition or the eventual abolition of the law. Both viewpoints are valid and cannot be completely refuted. However it is unlikely given the evidence of alcohol prohibition, that there will be the 'flood' of drug users

[2] The price to the consumer includes the cost of legal punishment, which will be removed under legalisation, as such the price perceived by consumers will be lower.

that some commentators suggest, especially in the long run when "tasting trials"[3] will smooth out.

Poverty

There are those who argue of the possible effects of producing and exacerbating poverty levels. This stems from the belief that alcohol and cigarette consumption are often strongly correlated with poverty. However, causality is not well defined here. We do not know if poverty induces drug use or whether drug use causes poverty.

Kaestner (1998) looks at the potential causal effects that illegal drug use has on poverty. He finds that after controlling for other characteristic variables such as age, family background, etc., there is some causal effect: "a large preponderance of the estimates indicated that marijuana and cocaine use significantly increase the probability of being poor". However, Kaestner qualifies his findings with warnings about "several empirical limitations that make this a less than definite analysis"(Ibid.).

On the other hand, it is feasible that the casual effect, should it exist, will not be as strong as one might think *ex ante*, as will be discussed later. Illegal drugs such as cannabis may be strong substitutes for alcohol and cigarettes, and any effect that they (illicit drugs) cause will be, as a result, diluted.

Purity of Produce

A strong argument for legalising drugs is the improved purity content of the drug sold as a result of legalisation, and eventual regulation. It is widely contended that the majority of deaths from drug use are due to impurities in the product sold. Presumably, a regulated legal market would result in fewer deaths among users. This is the heart of the argument put forward by a Mr. Fulton Gillespie (2001) to the House of Commons in England. After the tragic death of his son, a drug addict, Mr. Gillespie discovered that his son died as a result of the toxic content of the heroin he consumed. He expresses in his memorandum to the commons, a view that is reflected by number of people: "drugs are a public health, not a criminal matter"(Ibid.) He cites three reasons for this:

a) "They should be taken out of the monopoly clutches of criminals;
b) The billions saved in law enforcement, street and property crime etc. should be channelled into control, licensing, education, prevention and treatment

[3]"Taste trials" refers to users who may sample drugs out of curiosity, but who may not have done so under prohibition. This effect will smooth out over the long run, to a stable level, i.e. one where as each generation comes of age they will 'taste trial'.

c) That thousands more like my son will die from criminally-supplied impure drugs unless western governments recognise that the present war against drugs is un-winnable and counter-productive." (Ibid.)

Crime Associated with Users

Another argument for legalising drugs is that the crime caused by users in order to finance their habit would diminish. Crime of this nature 'feeding a drug habit' currently accounts for a third of all crimes in the UK: "Feeding a drug habit can cost £20,000 a year – which many addicts fund largely through theft." (10 Downing Street, 1999).

Crime is an obvious externality of drug use, which is not only motivated by the addictiveness of the drug, the intensity of consumption, but also the price. It can be argued that a legal market could facilitate the optimal price level in order to minimise these negative externalities.

Clague (1973) sketches rough outlines of some possible legal strategies for dealing with heroin addictions.[4] Clague, interestingly, concludes that a heroin maintenance scheme where heroin is distributed freely and safely at depots scores 'best' on a number of points including crime reduction and minimising disease (a factor, which will be discussed later).

Crime Associated with Dealers

One of the central arguments legalisation advocates is the proposed reduction in crime associated with gaining market control. This crime, widely reported in the press, is depicted as mostly extremely violent and is considered by many analysts to be escalating problem. As Miron and Zwiebel explain, "prohibition is likely to lower marginal costs and raise marginal benefits to violence in an industry". They provide several reasons for this fact, including factors such as: "participants cannot use legal means to solve problems, participants are already breaking the law and concealing another crime is marginally cheaper." (Miron and Zwiebel, 1995).

This point is also illustrated in a United Nations Educational, Scientific, and Cultural Organization (UNESCO) report:

> "All over the world, the existence of laws that prohibit…compel practices and organisational forms that are both underground and violent in their means of negotiation (threats, intimidation, blackmail, extortion) or in conflict resolution (aggressions, murders, terrorism) to react accordingly to either their commercial or private disputes" (Schiray et al, 2002).

[4] While Clague avoids a discussion of legalising heroin, his analysis insightful for a discussion of legalising the drug.

Disease

Another implication is the reduction in the spread of disease, especially that of AIDS (associated with sharing of needles in the use of heroin, or through association with other industries such as prostitution). This is a widely recognised problem and has motivated many policy changes across Europe. According to a UNESCO report: "many drug addicts become ill from drug taking and may therefore become the 'high-risk group' for transmitting HIV and AIDS." (Ibid).

Terrorism

A very topical point within this debate is that allegedly, the proceeds from illegal drug trade are often used for the funding of terrorist organisations. It is alleged that in countries like Afghanistan, the drugs trade funds terrorist organisations, namely in the case of Afghanistan, the Al-Qaeda. If the market for drugs was brought under government control then selectivity in suppliers could be emphasised.

Opportunity Costs of Enforcement

A classic economic perspective involves the opportunity costs of law enforcement and the opportunity cost of maintaining prisoners. The money spent on the 'war on drugs' and maintaining the growing prison population could be spent on educating potential users to the dangers of drugs. Some figures may help elucidate the problem. In the UK during the year 2000, c. 111,000 people were dealt with for principal drug offences, c. 47,000 were cautioned or fined and c. 64,000 went through the courts of which c. 55,000 were found guilty. Some might argue these people are inherently dangerous. However when one looks at the figures more closely 74,000 ca. of those people were dealt with for possession of cannabis, a relatively harmless drug (Corkery, 2002). Whether one believes that this is a waste of resources or not is subjective, but the foundations for the argument are there. One should also keep in mind the theory that prisons introduce people to criminal networks and as such create criminals rather than rehabilitate them. In the UK: "60% of all offenders go on to commit more crimes after their sentence has ended" (10 Downing Street, 1999). Apart from the reduced crime, there would also be the benefit of additional tax revenue from the legalised drugs market. For instance, the drugs market in the UK for the year 1998 was estimated to be c. £6,613.5 million, a mere 1% of that brings in £66million (Bramley-Harker, 2001).

Miron (2003) from Boston University has carried out research assessing the budgetary implications of legalising marijuana. He estimates that it could save the government of "Massachusetts $120.6 million per year in government expenditure on criminal justice enforcement of prohibition." His report also indicates that legalisation would yield additional tax revenue of $16.9 million annually.

Complementary Illicit Markets

There are also possible knock-on effects on other illicit markets such as prostitution. It is commonly publicised that a significant portion of women involved in prostitution are drug users. A recent report by the BBC showed that the majority of prostitutes in Bristol are 'feeding' their drug habit. While this is not a conclusive survey it is a clear indicator of a definite causation. BBC Points West reporter Scott Ellis said: "What is different in the city now is that women are turning to prostitution because they are addicted to drugs" (BBC News, 2003). Perhaps by decriminalising drugs women with addictions will not be forced into these situations, either through 'pimp-pushers' imposing extortionate prices or through being stigmatised by society.

Utility of Consumption; Rational Addictions

There is a further argument, a corner stone to much economic theory; that of the utility of the consumption of drugs. Utility derived from drug consumption should be accounted for in assessing a cost-benefit analysis of legalising the market. The choice to consume drugs is, under the assumptions of rationality, like any other good. It is therefore said that the consumer will maximise their utility such that the marginal utility divided by price (i.e. MU/P) is constant across all goods. By making a product illegal, the government is minimising the consumption possibilities of consumers, and distorting the shape of their utility maps.

The Demand for Substitute Goods

There is also the sometimes forgotten effect, on the consumption of substitute goods such as alcohol and cigarettes. Both the aforementioned goods are similar in nature to 'harder' drugs, with characteristic traits such as addictiveness. Both cigarettes and alcohol carry negative externalities, the most pronounced being, especially for cigarettes, increased health care risks. A well-founded theory in economics is that the consumption of a good is negatively correlated with its substitutes. It is possible therefore that the perceived negative externalities associated with increased consumption of drugs will be counteracted by the reduction in consumption of alcohol and cigarettes.

Forgotten Medicinal Benefits

Many commentators advocate the medicinal benefits of drugs. Marijuana, it is asserted, has useful medicinal benefits that are not utilised due to its illegality and then the stigma attached to that.

Schlosser (2003), taking reference from a book entitled [*Marijuana], the Forbidden Medicine* by Dr. Lester Grinspoon, an emeritus professor of psychiatry at Harvard Medical School, outlines some of the proposed benefits. These include

relief from nausea associated with chemotherapy, prevention of blindness induced by glaucoma, an appetite stimulant for AIDS patients, an anti-epileptic, help warding off asthma attacks and migraine headaches, alleviation of chronic pain, and reduction of the muscle spasticity that accompanies multiple sclerosis, cerebral palsy and paraplegia.

With a legal market, it is possible that the proposed benefits of marijuana can be explored further, both by government and informed consumers. But as Dr. Grinspoon says: "You cannot patent this plant" (Ibid), so it is unlikely it will receive the research it requires without government assistances.

The Stepping Stone Theory

One of the few arguments against legalising drugs is that perhaps lighter drugs act as stepping-stones to harder drugs. However, there is evidence, from research carried out that this effect is overstated. Indeed, in the Netherlands where marijuana use has been decriminalised, there is evidence that the places of purchase for the various drugs differ substantially - cafes are the key outlets for marijuana purchases, yet cocaine and other drugs are rarely purchased in these outlets (Cohen et al., 1999). Similarly, a study in the UK finds that after controlling for the role of unobservable factors (such as a social or psychological predisposition toward antisocial behaviour) the spurious association between 'soft' and 'hard' drugs dissipates (Pudney, 2002). The researchers came to a conclusion that the proposed 'gateway' effect is minimal and as such, economically insignificant.

Topic for further study: Cost-Benefit Analysis?

The discussion above provides a possible starting point from which to initiate a more quantitative analysis of the effect of legalising drugs. Distinctions need to be made between physically addictive and non-addictive drugs, which were largely ignored in this essay.

Also I would note that as with any cost benefit analysis there will be different weights attached to each factor. From a generalised viewpoint I believe those factors (i.e. externalities) that affect non-users should be weighted heavier than those that affect users, the rationale being that the user has made a 'choice' where as the non-user has not, i.e. the user should have 'priced' the costs into his decision to consume.

Natural Experiments

In all branches of economics, there is a need for empirical backing of theory. Within the drugs debate instances of such possibilities for research are limited. The following are applied cases of legalisation of drugs in action, and provide us with real world settings from which to study the effects of prohibition.

Decriminalisation in 1970s USA.

Lee (1993) demonstrates with reference to data from the era of 'decriminalisation' of marijuana in 1970s USA that harassing drug users is an ineffective means of reducing consumption. Lee outlines an explanation for this assertion by investigating the dynamics of an illicit market, which are quite distinct to that of the traditional supply and demand framework (Ibid.).

Traditionally, it has been viewed that an illicit market works similarly to that of a legal market, where the threat of penalties raises the cost for the seller and the price for the buyer. As such a stricter enforcement policy is more effective in combating drug use. However, Lee contends that this is not necessarily the case. Lee's argument is based on the concepts of the factors that determine the choices made by sellers and buyers. Firstly, he posits that users of drugs hold a stock of drugs that they maintain. He then identifies two penalties that motivate the purchase decisions made: possession penalty and transaction penalty. These factors work in opposite directions: the possession penalty encourages the buyer to make many small purchases, while the transactions penalty pushes the buyer to make few large purchases. Similar motivations are determined for the supplier.

Lee explains the reduced consumption in the eleven states that 'decriminalised' marijuana as being driven by the changed dynamics of supply and demand (inexplicable in a traditional framework, where demand would increase due to decreased penalties and as such total consumption should rise).

Under the 'decriminalised' market, the use and possession of a small amount of marijuana no longer resulted in criminal prosecution, small fines. Citations still occurred, and states continued to criminally prosecute supply. This divergence in the treatment of suppliers and users of drugs meant that demanders of drugs were "less fearful of open market transactions involving a small amount…of marijuana". However, suppliers still faced large penalties as before. Therefore, while demand increased, supply of small quantities was less responsive, and possibly even decreased: "when the criminal justice system punishes dealers much more severely, the supply could decrease much more than the demand would increase, so that the net effect would be less consumption." (Ibid). Lee also suggests another possibility, that of an unusual demand behaviour that he dubs "forbidden fruit syndrome". Yet, he declares that no noteworthy adjustment in thinking or feelings were evident, on the part of demanders, from research at that time (Ibid.).

Alcohol Prohibition 1930's USA

Miron and Zweibel (1991) studied alcohol consumption during prohibition in 1920s USA. As they comment themselves: "although the parallels between the criminalisation of alcohol and the criminalisation of drugs are not exact, prohibition

provides a natural setting in which to examine the impact of legal restrictions on the use of substances such as alcohol or drugs."

After recognising the difficulties of gauging the size of an illegal market, they looked for proxies for the consumption of alcohol and then managed to create a statistically significant explanatory model.

Their findings are that in the initial years of prohibition there was a dramatic reduction in the amount of alcohol consumed, but over time consumption levels began to increase and by the abolition of the 'dry laws' consumption was already up to 60-70% of pre-prohibition levels, and rising.

The reasoning behind this is that while demand never changed, supply took time to accommodate itself to the new mechanisms of an illegal market. This makes intuitive sense, as networks of supply are difficult to establish, especially under the auspices of an illegal market. Also of note is that post-prohibition total consumption did not rise dramatically. Clearly any consumption control strategy had serious problems.

What about some of the other factors mentioned earlier? It is difficult given the era to find data relating to this information. However, Miron (2001) has written papers, such as *Violence, Guns and Drugs: A Cross-Country Analysis,* which outlines some of these effects.

He illustrates that guns[5] are not an indicator of violence.[6] He demonstrates, however, that expenditure on enforcement of drug prohibition is a significant explanatory variable for violence. He explains this phenomenon as arising from, as discussed earlier, the lower marginal costs of violence for drug dealers. This translates into a greater perceived demand for guns by the public that in turn contributes further to a violent society.

Conclusion

A number of aspects within the debate on the legalisation of drugs have been outlined. It is important to acknowledge some of the limitations associated with this essay. Of note are the important distinctions between addictive and non-addictive substances that were not drawn out in this analysis. There is a lack of extensive literature on 'natural experiments', due to the nature of the markets being studied. As Lee (1993) illustrates, inferences drawn from illegal markets about legal markets are not applicable. Nevertheless, there would appear to be sufficient economic grounds to infer that a legal, regulated market for drugs is superior to the

[5] When America is removed from samples.
[6] Measured as number of homicides

current illegal market. The discussion is a strong starting point for studies such as quantitative cost-benefit analyses that might verify the current information available, and allow a more precise examination of this misunderstood industry.

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Bibliography:

10 Downing Street (1999), *Crime and Justice: Annual Report 98/99* [Online]. 10 Dowling Street. Available from: <http://www.number-10.gov.uk/output/page216.asp#>

BBC News. (2003), "Drugs Lead to Prostitution Boom." [Online]. *BBC News.* Available from: <http://news.bbc.co.uk/go/pr/fr/-/1/hi/england/bristol/2931983.stm>

Bramley-Harker, E. (2001), "Sizing the UK market for Illicit Drugs" [Online]. *Research and Development Statistics Directorate (RDS).* Occasional Paper No 74. Available from: <http://www.homeoffice.gov.uk/rds/pdfs/occ74-drugs.pdf>

Clague, C. (1973), "Legal Strategies for Dealing with Heroin Addiction" *American Economic Review*, Vol. 63 (2).

Cohen, Peter, D. A. et al. (1999), "Licit and illicit drug use in the Netherlands, 1997" [Online]. *Centrum voor Drugsonderzoek, Universiteit van Amsterdam*. Available from: <http://www.cedro-uva.org/lib/abraham.npo97.pdf>

Corkery, J., M. (2002), *Drug Seizure and Offender Statistics, United Kingdom, 2000,* Home office: London: 2002.

Drug Policy Alliance (2003), "The History of Prohibition" [Online]. *Drugs Policy Alliance*. Available from: <http://www.drugpolicy.org/race/historyofpro/>

Fisher, I. (1927), "The Economics of Prohibition." *American Economic Review,* Vol. 17 (1).

Gillespie, F. (2001), "Memorandum Submitted by Mr. Fulton Gillespie" [Online]. *Appendices to the Minutes of Evidence*. Available from:

<http://www.parliament.the-stationery-office.co.uk/pa/cm200102/cmselect/cmhaff/318/318ap25.htm>

Kaestner R. (1998), "Does Drug Use Cause Poverty?" [Online]. *NBER Working Paper* 6406 Available from: <http://www.nber.org/papers/w6406>

Lee, L.W. (1993), "Would Harassing Drug Users Work?" *The Journal of Political Economy*, Vol. 101 (5).

Miron, J. A. and Zwiebel, J. (1995), "The Economic Case Against Drug Prohibition," *The Journal of Economic Perspectives*, Vol. 9 (4).

Miron, J., A. (2001), "Violence, Guns and Drugs: A Cross-Country Analysis" [Online]. *Journal of Law and Economics*, XLIV (2) Available from: <http://econ.bu.edu/miron/images/gd_isp.pdf>

Miron, J., A. (2003), "The Budgetary Implications of Marijuana Legalization in Massachusetts" [Online]. *Boston University*. Available from*:* <http://econ.bu.edu/miron/images/legalize_mj_ma.pdf>

Miron, J., A. and Zwiebel, J. (1991), "Alcohol Consumption During Prohibition" *The American Economic Review*, Vol. 81 (2).

Pudney, S. (2002), "The road to ruin? Sequences of initiation into drug use and offending by young people in Britain" [Online]. *London Home Office Research: Development and Statistics Directorate*. Available from: <http://www.homeoffice.gov.uk/rds/pdfs2/hors253.pdf>

Samuel Caldwell Revenge (2003), *The First Causality of the Drug War* [Online]. Available from: <http://www.samuelcaldwellsrevenge.com/>

Schiray et al. (2002), *Drug Trafficking, Criminal Organisations and Money Laundering*, United Nations Educational Scientific and Cultural Organisation, and United Nations Office for Drug Control and Crime Prevention: New York.

Schlosser, E. (2003), *Reefer Madness and other tales from the American underground*. London: Allen Lane The Penguin Press.

The Quote Cache (2003). Available from: <http://quotes.prolix.nu/Drugs/Alchohol/>