



FIFTY YEARS ON: EVALUATING U.S.
RECREATIONAL DRUG POLICY



TO WHAT EXTENT HAS U.S. FEDERAL
RECREATIONAL DRUG POLICY SUCCESSFULLY
TACKLED THE EXTERNALITIES ASSOCIATED
WITH NARCOTIC USE?

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1 – ABSTRACT

“America’s public enemy number one is drug abuse. In order to defeat this enemy, it is necessary to wage a new, all-out offensive.”¹ With these famous words, President Richard Nixon declared a national war on drugs in June 1971; fifty years and over \$1 trillion later, it continues to dominate the news. This study aims to evaluate the success of US Recreational Drug Policy in tackling the externalities associated with narcotic use, before exploring the economic and social consequences of punitive prohibition law.

We first quantify the external costs stemming from illicit drug use, concentrating on healthcare expenses, drug-related crime, and the loss of workplace productivity; we find that, annually, substance abuse costs the US economy over \$137 billion. We then explore the impacts of drug interdiction, highlighting: (a) the growth in cartel scarcity power; (b) the rise in gang violence; (c) the medical dangers arising from asymmetric information in drug markets; (d) the burden on the criminal justice system caused by punitive laws; (e) the loss of potential hypothecated tax revenue. Referencing a CATO institute study (Miron, 2018), this paper concludes that the annual opportunity cost of current drug policy totals \$106.1 billion.

Still, the immense costs faced by minorities, who face disproportionate imprisonment for drug-related crimes, are not accounted for in objective figures. Thus, we actively highlight the manner in which the War on Drugs has blighted the lives of thousands of young, disadvantaged Americans, undermining decades of effort to improve the prospects of black communities.

This study finds that, like Portugal, American society would benefit from the decriminalisation of personal drug use. Ultimately, we conclude that the 1971 US War on Drugs has resulted in government failure: it has created far greater problems than it has solved.

¹ Chris Barber, "Public Enemy Number One: A Pragmatic Approach To America’S Drug Problem », *Nixonfoundation.Org*, 2016 <<https://www.nixonfoundation.org/2016/06/26404/>> [Accessed 2 February 2021].

2 – INTRODUCTION

2.1 THE ISSUE WITH NARCOTICS

In 2016, there were 197,200 Americans incarcerated for drug-related crimes in State Correction facilities, with a further 81,900 in Federal Prisons², and in 2017, the National Institute on Drug Abuse reported 70,237 deaths due to overdose.³ The USA continues to fight a 'War on Drugs'.

Drugs are substances that have physiological effects when introduced into the body⁴, and illicit drugs fall into two categories: those which are illegal to process, sell and consume, and those prescribed for strict medicinal purposes only.

Economically, narcotics are demerit goods, which are over-consumed in the free market, and hence have negative externalities of consumption. Drug consumption brings great societal costs, such as the loss of potential workforce, opportunity costs to healthcare services, and related criminal offenses. Therefore, as the body responsible for coordinating Federal Drug Policy⁵, the Office of National Drug Control Policy has imposed a strict ban on the recreational use of all drugs.

2.2 FORMULATING THE RESEARCH QUESTION

With Michigan the most recent of ten states to legalise recreational marijuana, the USA continues to have divided opinions on whether complete narcotic prohibition is actually best for societal wellbeing. A proportion of the populace, supported by Libertarian economist, Milton Friedman, feel that intervention has failed to correct negative drug externalities, whilst simultaneously introducing unique problems. They argue that Federal Policy not only causes the inefficient allocation of resources⁶, but that the resulting decline in welfare actually outweighs the cost of narcotic use: this is Government Failure.

Therefore, this essay will evaluate the magnitude of the problems Drug Policy is attempting to solve against the net impact it has actually had on communities, ultimately answering the research question:

To what extent has U.S. Federal Recreational Drug Policy successfully tackled the externalities associated with narcotic use?

² E. Ann Carson, PhD, "Prisoners In 2016", *US Dept Of Justice: Bureau of Justice Statistics*, 2018, pg.13 <<https://doi.org/NCJ 251149>> [Accessed 17 April 2019].

³ NIDA, "Overdose Death Rates", *Drugabuse.Gov*, 2019 <<https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>> [Accessed 17 April 2019].

⁴ Oxford English Dictionary, "Drug | Definition Of Drug In English By Oxford Dictionaries", *Oxford Dictionaries | English*, 2019 <<https://en.oxforddictionaries.com/definition/drug>> [Accessed 17 April 2019].

⁵ ONDCP, "Office Of National Drug Control Policy", *The White House*, 2019 <<https://www.whitehouse.gov/ondcp/>> [Accessed 17 April 2019].

⁶ Geoff Riley, "Government Failure | Economics | Tutor2u", *Tutor2u* <<https://www.tutor2u.net/economics/reference/government-failure>> [Accessed 17 April 2019].

3 – RESEARCH APPROACH

3.1 METHODOLOGY

Although there is a myriad of literature surrounding US Drug Law, I first gained a personal insight into the nature of the market for narcotics, by conducting primary research. I asked a sample of New Jersey college students (aged 18+) to complete a survey on their marijuana use. By comparing current demand with their demand at a range of hypothetical prices, I was able to calculate an approximate Price Elasticity of Demand (PED) for cannabis. Here, the questions needed to be closed to guarantee exact, quantitative data.

Further primary research included interviewing a Tampa Emergency Department Physician. This offered qualitative insight into the impact of addicts on medical services and community welfare, introducing the concept of negative externalities. I hence decided to calculate the relative monetary costs of three key drug externalities: loss of productivity, healthcare costs, and drug-related crime.

Following this, I progressed to discuss a number of external costs resulting from current interdiction. A Cato Institute⁷ study crucially quantified the financial impacts of prohibition law, with Drug Policy Alliance reports⁸ conveying the more emotional, social implications.

Therefore, whilst my eventual verdict was by nature somewhat subjective, my approximations of the costs inflicted by narcotic externalities, and by prohibition law itself, ultimately allowed me to inductively evaluate the true impact of Recreational Drug Policy.

3.2 ETHICAL PRECAUTIONS

Since I conducted two independent pieces of primary research, it was vital to follow IB ethical guidelines throughout. Prior to distributing my survey, I ensured to emphasise its purpose and anonymous nature, also explaining that there was no pressure to answer if one felt uncomfortable. Similarly, having contacted the ED Physician in advance, he had requested for his identity to be withheld and our telephone conversation not to be recorded: I hence honoured these requests.

⁷ Jeffrey Miron, "The Budgetary Effects Of Ending Drug Prohibition", *Cato Institute - TAX AND BUDGET BULLETIN NO. 83*, 2018 <<https://www.cato.org/publications/tax-budget-bulletin/budgetary-effects-ending-drug-prohibition#full>> [Accessed 23 May 2019].

⁸ Drug Policy Alliance, "The Drug War, Mass Incarceration And Race", *Drugpolicy.Org*, 2018 <http://www.drugpolicy.org/sites/default/files/drug-war-mass-incarceration-and-race_01_18_0.pdf> [Accessed 18 April 2019].

4 –US MARKET FOR NARCOTICS

A recent UN figure estimates the size of the US narcotics market to be between **\$200 and \$750 billion**⁹. However, in reality, this does not give a clear indication of the prevalence of drug use in a typical community. I hence conducted primary research asking college students from Newark, NJ to complete an anonymous survey about their use of cannabis.

4.1 PRIMARY RESEARCH – A SURVEY

Since there is considerable difficulty collecting survey data from foreign subjects, I approached a friend from Newark and carried out a pilot test, ensuring my questions would produce the quantitative figures required for PED calculations. Following this, he distributed the survey (Appendix A) to a sample of 14 volunteering students, emphasising its anonymity. When complete, he emailed me images of the responses.

The results are seen below:

(The street price for high-quality cannabis was \$12/gram.)

Subject	Current consumption/ week at \$12/g (g)	Consumption/ week if \$5/g (g)	Consumption/ week if \$10/g (g)	Consumption/ week if \$20/g (g)
1	4	6	4	3
2	0	0	0	0
3	9	11	10	7
4	4	7	5	3
5	2	4	3	1
6	1	2	1	0
7	0	0	0	0
8	0	2	1	0
9	3	7	4	2
10	5	8	6	4
11	20	30	24	14
12	6	8	6	4
13	0	0	0	0
14	3	5	4	2

The survey shows that 10 of 14 subjects illegally smoke cannabis currently. A clear anomalous result came from subject 11, who reported he smoked 20g per week, with the next highest figure at 9g. Therefore, I excluded him from my PED calculations. However, subject 8 yielded the most interesting result. Although he

⁹ RAND, "How Big Is The U.S. Market For Illegal Drugs?", *Rand.Org*<https://www.rand.org/content/dam/rand/pubs/research_briefs/RB9700/RB9770/RAND_RB9770.pdf> [Accessed 23 May 2019].

doesn't currently smoke, he suggested that he would smoke 2g if prices fell to \$5/g, and 1g at \$10/g. This suggests that fear of health impacts and potential prosecution are not the only factors deterring citizens from cannabis: price also holds importance.

4.1.1 CALCULATING THE PED OF CANNABIS

Equation:
$$PED = \frac{\% \Delta \text{ in quantity of the good demanded}}{\% \Delta \text{ in good's price}}$$

For each change in price, I calculated a PED value (using Excel), taking a mean for all reliable subjects:

\$12/g → \$5/g: PED = (-)1.10

\$12/g → \$10/g: PED = (-)1.04

\$12/g → \$20/g: PED = (-)0.51

My primary research suggests that the PED of cannabis approximately ranges from **0.51 to 1.10** (median=0.81). This suggests that narcotics have inelastic PEDs, where demand changes less than proportionately to a price change.

Most alarmingly however, 11/14 subjects showed interest in using an illicit drug. This epitomises the significance of the nation's problem.

Nevertheless, there are notable limitations to my research. Firstly, the survey's small sample size may mean it is not representative of cannabis use in a typical community: one would expect greater access to narcotics in a college environment. Thus, to truly illustrate the prevalence of drugs in everyday society, it would have been insightful to collect data from a wider range of citizens: those of different age, socio-economic statuses and education levels. Finally, I hoped that clarifying my project's purpose to the subjects and ensuring anonymity would encourage honesty. However, it is impossible to know whether some inaccurately self-reported; hence, excluding anomalies when processing my data was the most I could do to maximise reliability.

Therefore, this small-scale research task truly helped me fathom the magnitude of this 'War on Drugs'. This hence encouraged me to delve deeper into my research question, exploring the range of externalities Federal Policy is attempting to resolve, as well as the net impact interdiction has had on welfare.

5 – THEORY: DRUGS AS A DEMERIT GOOD

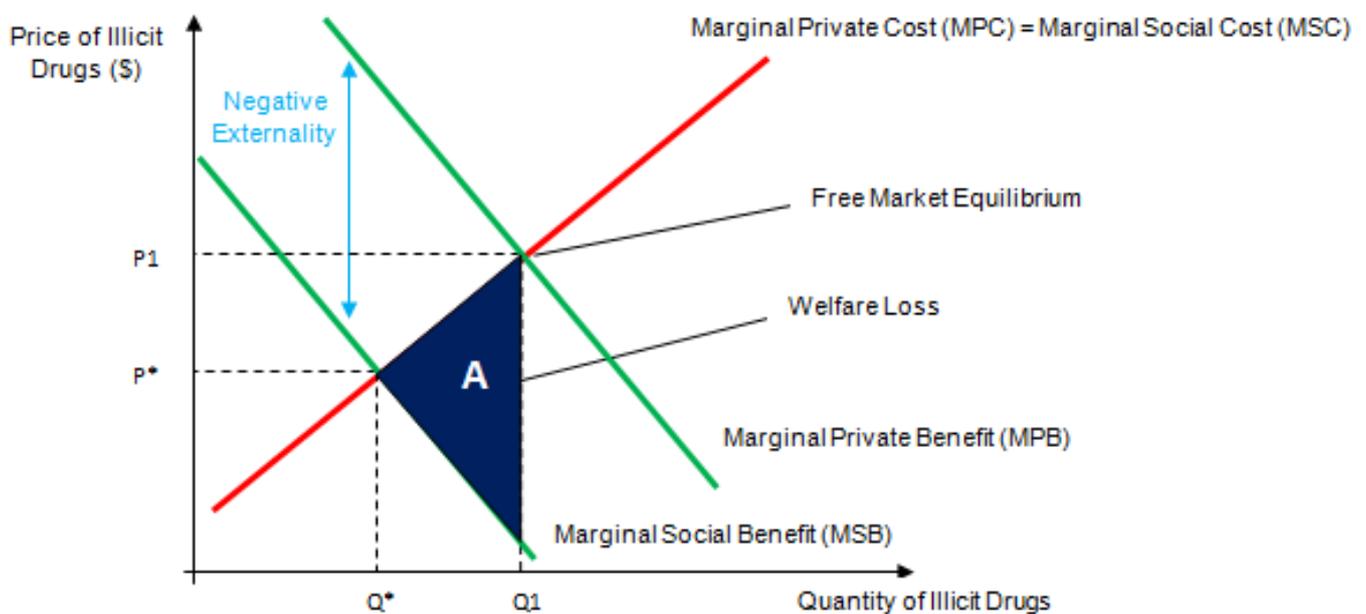


Fig.1 Model illustrating the negative externalities and welfare loss caused by consumption of Illicit Drugs

Fig.1 depicts that the MPB obtained from consuming illicit drugs (e.g. euphoria) is greater than the MSB, showing that narcotics lead to negative externalities of consumption.

In the free market, Q_1 narcotics are consumed at equilibrium, at a price of P_1 per unit. However, in this model, the allocatively efficient point, where scarce resources are rationed most efficiently from society's point-of-view is Q^* , where $MSC=MSB$. Hence, in the free market, narcotics are over-consumed by Q_1-Q^* . This misallocation of resources results in a reduction in social benefits, known as welfare loss: this is triangle **A**.

Consequently, it is in society's best-interest to reduce the consumption of narcotics. However, the Federal Government feel that the MSB obtained from drug consumption is so low, and hence consumption externalities so great, that complete prohibition of narcotics is the best policy to adopt.

6 – COSTS OF NARCOTIC CONSUMPTION

6.1 PRIMARY RESEARCH – A TELEPHONE INTERVIEW

Although my survey offered an initial insight into the nature of the US drug market, I wanted to uncover the actual impacts that drug use is having on society. Therefore, I conducted qualitative research, interviewing a family friend who works as an ED physician in Tampa, Florida.

Prior to our interview, I had expressed a particular interest in his experience treating drug-related emergencies, as well as the medical laws related to narcotics.

Therefore, I spent time drafting a range of suitable interview questions that would elicit responses to help answer my research question. It was crucial that these were open-ended, to allow him to answer freely. After discussion, we decided to narrow the list to the seven questions seen in Appendix B.

6.1.1 FINDINGS

Since the physician requested for no voice recording to be taken, there is no interview transcript; however, I was able to take notes.

He mentioned that “since 2015, there has been a steep increase in cases of heroin abuse,” telling me to research Hillsborough County figures, which bolstered this¹⁰.

However, his most insightful answer came when asked about the financing of the ED. He explained that “a law introduced in the 1980s, called EMTALA, means EDs must treat all patients, irrespective of their ability to pay.” Further research uncovered that although patients are inclined to make reimbursements for EMTALA-mandated care, over half of all emergency care goes uncompensated¹¹.

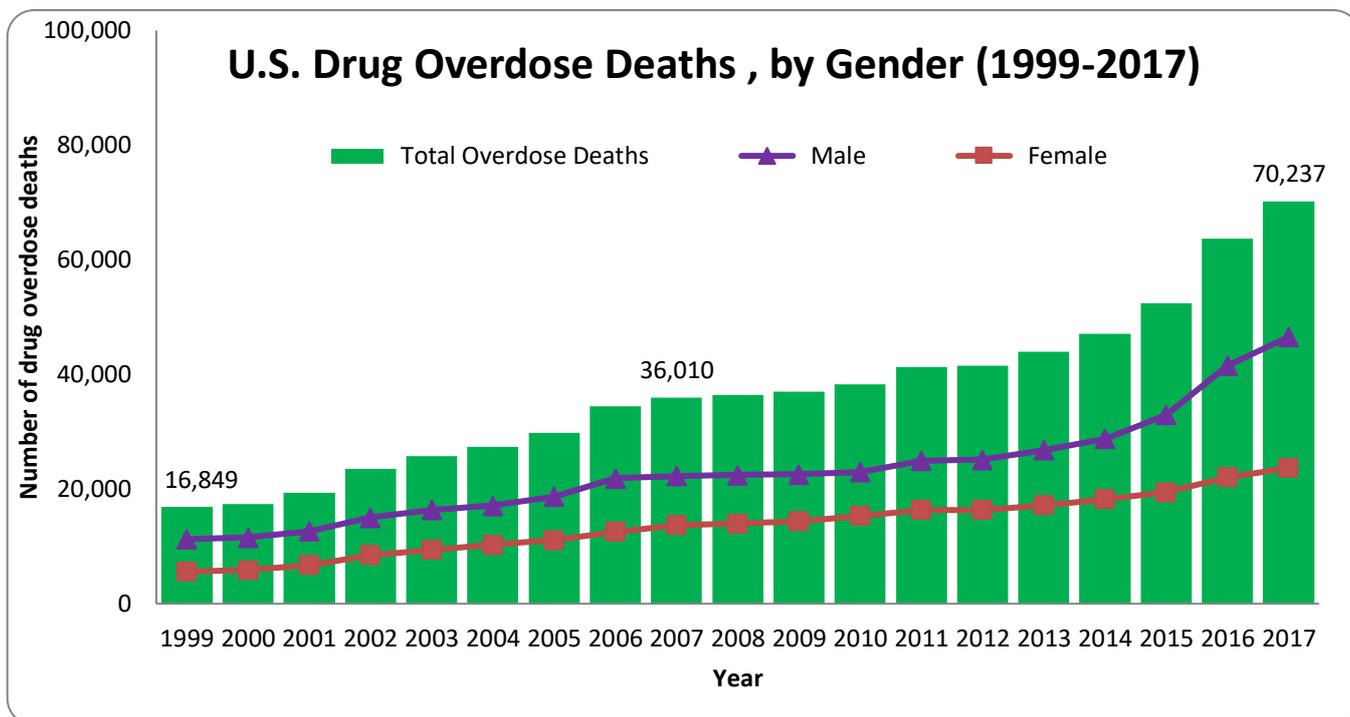
Therefore, this interview not only offered the viewpoint of a citizen who deals with drug users on a daily basis, but also exposed striking figures. This encouraged me to consult further secondary sources, analysing data depicting the key welfare impacts of narcotic use.

¹⁰ Dan Sullivan, "Heroin Deaths Rise In Tampa Bay, But Surge In Hillsborough", *Tampa Bay Times*, 2015 <<http://www.tampabay.com/news/publicsafety/heroin-deaths-rise-in-tampa-bay-but-surge-in-hillsborough/2247334>> [Accessed 22 May 2019].

¹¹ "American College Of Emergency Physicians", 2019 <<https://www.acep.org/patients.aspx?id=25932&id=25932>> [Accessed 22 March 2019].

6.2 HEALTH IMPACTS

6.2.1 OVERVIEW OF DATA



Sources of Data: NIDA, Statista, NCHS

Fig.2 shows a consistent increase in drug-related deaths over the last 20 years. In 1999, 16,849¹² US citizens died by overdose, but by 2017 this number had risen to over 70,000. This rate of increase has not been gradual, but rather augmented dramatically from 2014-2017, where we saw 7727 more deaths/year on average¹³.

The impacts of Class-A drugs are evident, with US cocaine deaths reaching an all-time peak in 2017, at 14,556¹⁴; however, a study by King's College London shockingly found that daily use of high potency cannabis can increase chances of developing psychosis by up to five times.¹⁵

Therefore, drug offenders consume narcotics at a significant private risk, perceiving their value as greater than that of good health. Yet, as demerit goods, illicit drugs also have detrimental impacts on the rest of society – these are negative externalities of consumption.

¹² NIDA, "Overdose Death Rates", *Drugabuse.Gov*, 2019 <<https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>> [Accessed 18 April 2019].

¹³ Statista, "Drug Overdose Deaths Number By Gender U.S. 2017 | Statistic", *Statista*, 2019 <<https://www.statista.com/statistics/611012/number-of-drug-overdose-deaths-in-the-us-by-gender/>> [Accessed 18 April 2019].

¹⁴ Statista, "Cocaine Related Deaths U.S. 1999-2017 | Statistic", *Statista*, 2019 <<https://www.statista.com/statistics/611237/cocaine-deaths-us-number/>> [Accessed 11 June 2019].

¹⁵ Marta Di Forti, Charlotte Gayer-Anderson and Estela Jiménez-López, "The Contribution Of Cannabis Use To Variation In The Incidence Of Psychotic Disorder Across Europe (EU-GEI): A Multicentre Case-Control Study", *The Lancet Psychiatry*, 6.5 (2019), 427-436 <[https://doi.org/10.1016/s2215-0366\(19\)30048-3](https://doi.org/10.1016/s2215-0366(19)30048-3)> [Accessed 3 May 2019].

6.3 NEGATIVE EXTERNALITIES OF DRUG CONSUMPTION

6.3.1 LOSS OF WORKPLACE PRODUCTIVITY

The largest external cost of narcotic consumption is the loss of workplace productivity. NDIC figures calculated that annually, drug abuse costs the nation over \$120 billion, with costs from reduced labour participation, premature mortality and hospitalized workers¹⁶.

6.3.2 HEALTHCARE EXPENSES

Moreover, although the USA does not have a universal healthcare program, in reality, 21% of hospitals are government run.¹⁷ In 2013, **64.3%** of all healthcare spending was paid for by the government¹⁸, including public health-insurance programs like Medicare¹⁹. Subsequently, drug abuse inflicts huge financial costs on the government budget, alongside the opportunity cost of treating users over other citizens. In 2017, state and federal receipts totalled \approx \$11 billion²⁰.

6.3.3 DRUG-RELATED CRIME

Finally, though the smallest externality by monetary value, the harmful actions of drug users have significant impacts on communities. Addicts not only pose the threat of violence, but are also associated with common crimes like theft. This was seen in Oklahoma (2014), where cattle larceny cost ranchers \$4.5 million - roughly three in four arrests²¹ were linked to methamphetamine addicts. Overall, the NDIC estimate annual costs from theft (to fund drug purchases), property crime and arson at \$5 billion, with the ADAM-II Report²² concluding that 63-83% of all arrestees test positive for illicit substances.

Therefore, when the costs of illicit drugs on the justice system are disregarded, since these arise as a consequence of interdiction (Section 6), the total external cost of narcotics is approximated at **\$137 billion per annum**²³.

¹⁶ NDIC (referenced in VeryWell Mind), "The Costs of Drug Use To Society", *Verywell Mind*, 2018 <<https://www.verywellmind.com/what-are-the-costs-of-drug-abuse-to-society-63037>> [Accessed 18 April 2019].

¹⁷ American Hospital Association, "Fast Facts On U.S. Hospitals, 2019 (From 2017 AHA Annual Survey) | AHA", *American Hospital Association*, 2019 <<https://www.aha.org/statistics/fast-facts-us-hospitals>> [Accessed 18 April 2019].

¹⁸ David U. Himmelstein and Steffie Woolhandler, "The Current And Projected Taxpayer Shares Of US Health Costs", *American Journal Of Public Health*, 106.3 (2016), 449-452 <<https://doi.org/10.2105/ajph.2015.302997>>.

¹⁹ Medicare, "Medicare.Gov: The Official U.S. Government Site For Medicare | Medicare", *Medicare.Gov*, 2019 <<https://www.medicare.gov/>> [Accessed 18 April 2019].

²⁰ Statista, "Tobacco, Alcohol, And Illicit Drugs Abuse Costs In The U.S. 2017 | Statistic", *Statista*, 2019 <<https://www.statista.com/statistics/367863/tobacco-alcohol-and-illicit-drugs-abuse-costs-in-the-us/>> [Accessed 18 April 2019].

²¹ Alex Mierjeski, "Meth Addicts Are Rustling Cattle To Fund Their Drug Habits", *VICE News*, 2019 <https://news.vice.com/en_us/article/zm5a78/meth-addicts-are-rustling-cattle-to-fund-their-drug-habits> [Accessed 22 May 2019].

²² ADAM II, "OFFICE OF NATIONAL DRUG CONTROL POLICY", *Obamawhitehouse.Archives.Gov*, 2014 <https://obamawhitehouse.archives.gov/sites/default/files/ondcp/policy-and-research/adam_ii_2013_annual_report.pdf> [Accessed 22 May 2019].

²³ NDIC (referenced in VeryWell Mind), "The Costs of Drug Use To Society", *Verywell Mind*, 2018 <<https://www.verywellmind.com/what-are-the-costs-of-drug-abuse-to-society-63037>> [Accessed 18 April 2019].

7 – IMPACTS OF FEDERAL DRUG LAW

7.1 EFFECTIVENESS OF US DRUG POLICY – DATA OVERVIEW

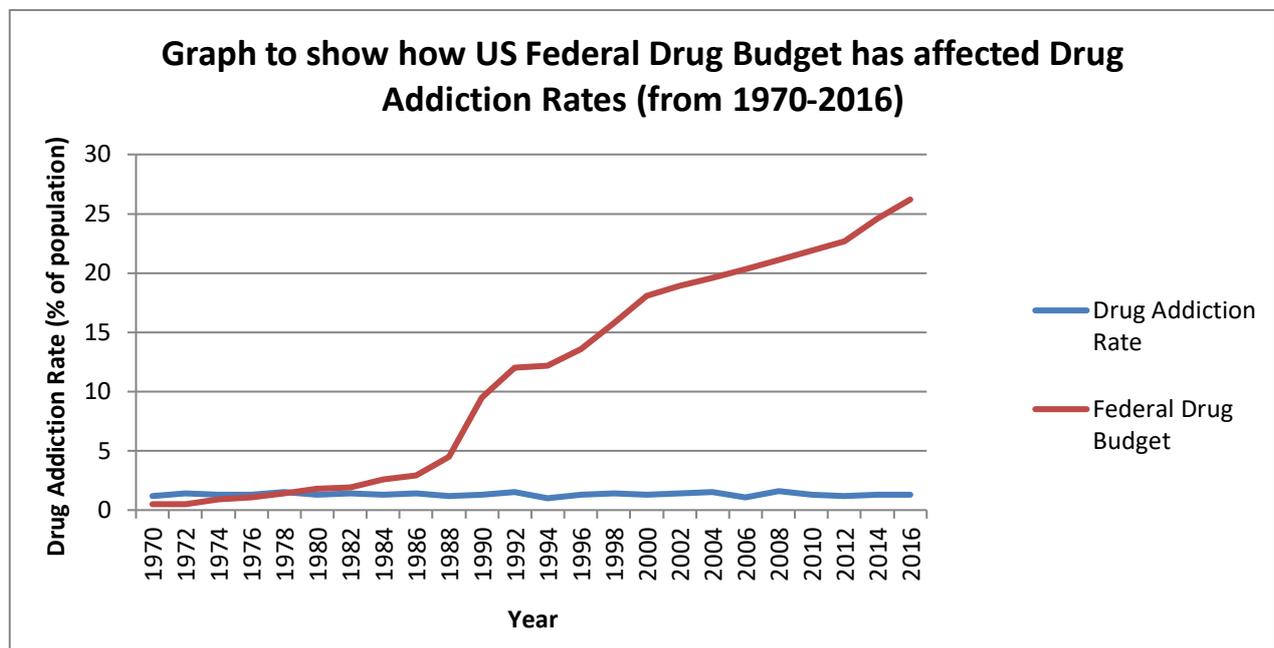


Fig.3 the Effect of US Federal Drug Spending on Drug Addiction Rates

Data from Drug Policy Alliance²⁴

Fig.3 illustrates the negligible impact of Federal Drug Policy since the 'War on Drugs' began in 1970. Over the 36-year period, the Federal Drug Budget has multiplied fifty-fold, growing from \$500,000 to \$26.2 billion. However, addiction rates have not changed: the percentage of US citizens addicted to narcotics remains at 1.3%.

Still, in order to directly address the concept of government failure, it is crucial to discuss whether interdiction has potentially evoked more problems than it has solved.

7.2 IMPACTS OF DRUG INTERDICTION

7.2.1 SCARCITY POWER OF DRUG CARTELS

Since a strict ban has been imposed on all narcotics, rational suppliers only enter the illegal market if profitability exceeds risk of imprisonment. This means that the nation's supply of drugs is lower than it would be in the free market, causing equilibrium to form at a higher price. However, it is the PED of narcotics that dictates the magnitude of this price rise.

²⁴ Drug Policy Alliance, "The Federal Drug Control Budget - New Rhetoric, Same Failed Drug War", *Drugpolicy.Org*, 2015

<https://www.drugpolicy.org/sites/default/files/DPA_Fact_sheet_Drug_War_Budget_Feb2015.pdf> [Accessed 23 May 2019].

Drugs are addictive, and therefore their consumption becomes habitual, to the extent that narcotics can become a necessity rather than luxury. The effect is that addicts will reduce their demand less than proportionately to a price rise, as seen below.

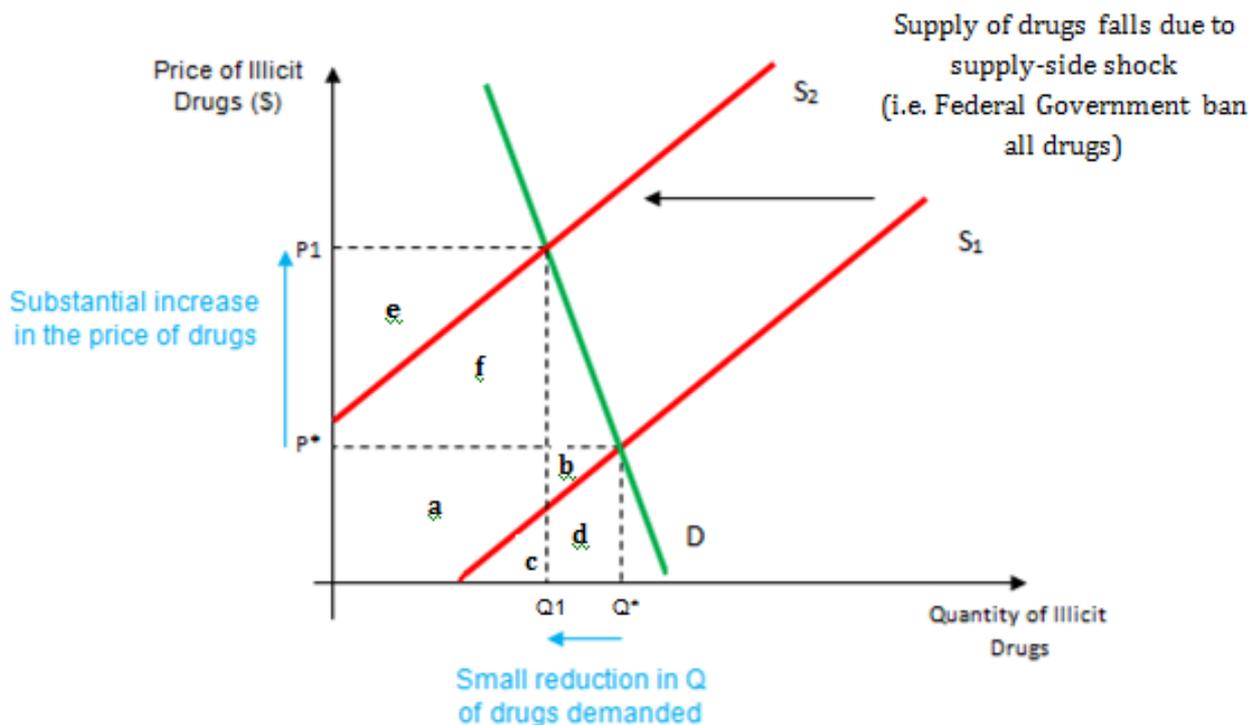


Fig.4 Model illustrating the inelastic demand for illicit drugs

A study calculated the PEDs of heroin and cocaine (for monthly users) to be 0.98 and 0.45 respectively²⁵. This price-inelastic demand, also observed in 3.1, puts drug cartels at a great advantage: they control the market with scarcity power, demanding high prices without demand falling considerably.

This is illustrated by Fig.4. In the free market, producers sell quantity Q^* of drugs at a price of P^* /unit, generating total revenue of areas: **a+b+c+d**. Following complete prohibition, however, producers now sell a lower quantity of Q_1 , but at an increased price, P_1 . This means total revenue is **a+c+e+f**. Hence, whilst suppliers lose areas **b** & **d**, they simultaneously gain **e** & **f**, and in reality, $e+f > b+d$. Consequently, interdiction leads to increased producer revenues, making entry into the illegal market appear even more lucrative.

Therefore, current intervention has introduced a significant problem into the market for narcotics, and this was powerfully encapsulated by Kurt Schmoke, in 1988:

“In the 1920's, alcohol was made illegal by Prohibition. The result: Organized Crime. Criminals jumped at the chance to supply the demand for liquor. When the American people saw what Prohibition was doing, they supported its

²⁵ William Rhodes and others, "Illicit Drugs: Price Elasticity Of Demand And Supply", *Ncjrs.Gov*, 2002 <<https://www.ncjrs.gov/pdffiles1/nij/grants/191856.pdf>> [Accessed 23 May 2019].

repeal. When they succeeded, most states legalized liquor and criminal gangs were out of the liquor business.”²⁶

7.2.2 GANG VIOLENCE

Since narcotics are scarce, possessing high street-value, a natural effect is inter-gang violence. Turf wars are acrimonious disputes between rival gangs over particular spheres of influence²⁷ and in the FBI’s 2015 Gang Report²⁸, 21% of respondents mentioned gang involvement in local homicide cases. The USA has over 25,000 street gangs with >750,000 members²⁹, and a striking figure indicates that in Chicago and Los Angeles, from 2009-2012, *nearly half* of all homicides were attributed to gang violence³⁰.

7.2.3 CRIMINAL JUSTICE SYSTEM

Now, the most financially devastating effect of prohibition is the expense to the criminal justice system, including prison costs, policing costs and a total opportunity cost. Drug interdiction has brought the need for punishment for disobeying the law and a study found that annually, **\$47.3 billion** is spent on prohibition³¹; eight states spend over \$50,000/year per prisoner³².

The USA has gained an infamous reputation for its mass incarceration: it comprises only “5% of the world’s population, yet 25% of its incarcerated population.”³³ Washington saw 4381 marijuana arrests in 2012 fall to 1,756 the year it was legalised, epitomising the insignificance of current arrests: 40% are for mere possession of cannabis³⁴.

However, drug-related imprisonment not only has damaging impacts on the Federal budget, but notable social impacts also.

²⁶ Schaffer Library of Drug Policy, "Should We Re-Legalize Drugs? A Statement By The Libertarian Party", *Druglibrary.Org* <<http://druglibrary.org/schaffer/Misc/lp-rld.htm>> [Accessed 23 May 2019].

²⁷ Oxford Dictionaries, "Turf War | Definition Of Turf War In English By Oxford Dictionaries", *Oxford Dictionaries | English*, 2019 <https://en.oxforddictionaries.com/definition/turf_war> [Accessed 23 May 2019].

²⁸ "National Gang Report 2015 | Federal Bureau Of Investigation", *Federal Bureau Of Investigation*, 2015 <<https://www.fbi.gov/file-repository/stats-services-publications-national-gang-report-2015.pdf/view>> [Accessed 23 May 2019].

²⁹ Youth.Gov, "Federal Data | Youth.Gov", *Youth.Gov* <<https://youth.gov/youth-topics/preventing-gang-involvement/federal-data>> [Accessed 23 May 2019].

³⁰ Arlen Egley, Jr, James C Howell and Meena Harris, "Highlights Of The 2012 National Youth Gang Survey", *Files.Eric.Ed.Gov*, 2014 <<https://files.eric.ed.gov/fulltext/ED553642.pdf>> [Accessed 23 May 2019].

³¹ Jeffrey Miron, "The Budgetary Effects Of Ending Drug Prohibition", *Cato Institute - TAX AND BUDGET BULLETIN NO. 83*, 2018 <<https://www.cato.org/publications/tax-budget-bulletin/budgetary-effects-ending-drug-prohibition#full>> [Accessed 23 May 2019].

³² Chris Mai and Ram Subramanian, "The Price Of Prisons: Examining State Spending Trends, 2010-2015", *Storage.Googleapis.Com*, 2017 <https://storage.googleapis.com/vera-web-assets/downloads/Publications/price-of-prisons-2015-state-spending-trends/legacy_downloads/the-price-of-prisons-2015-state-spending-trends.pdf> [Accessed 23 May 2019].

³³ Drug Policy Alliance, "The Drug War, Mass Incarceration And Race", *Drugpolicy.Org (From Roy Walmsley, World Population List, 10Th Ed.)*, 2018 <http://www.drugpolicy.org/sites/default/files/drug-war-mass-incarceration-and-race_01_18_0.pdf> [Accessed 23 May 2019].

³⁴ Drug War Facts, "Marijuana", *Drug War Facts (Data From "Crime In The United States 2015 - Arrests," FBI Uniform Crime Report (Washington, DC: US Dept. Of Justice, September 2015), P.1)* <<https://drugwarfacts.org/chapter/marijuana>> [Accessed 24 May 2019].

7.2.4 SOCIAL CONSEQUENCE – DISPROPORTIONATE BLACK PRISONERS

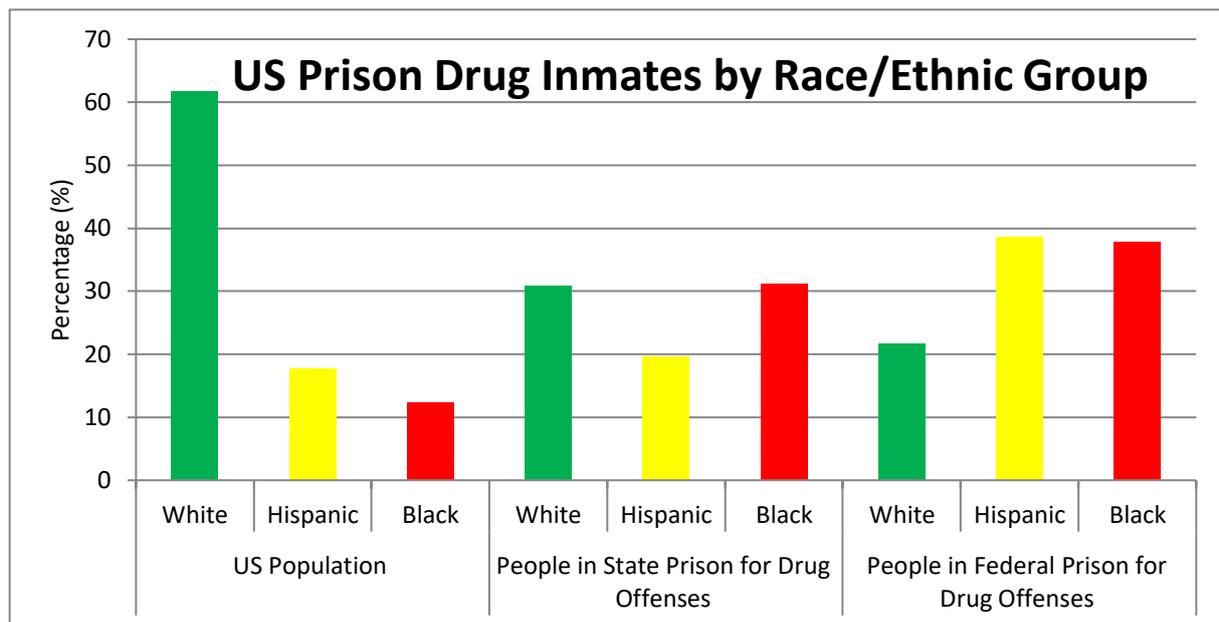


Fig.5 Proportions of US Prison Inmates (for Drug Offenses) by Race/Ethnicity

Source of Data: Statista³⁵, BJS³⁶

Fig.5 depicts that 61.3% of the US population are Caucasians, with 17.7% Hispanic and just 13.3% Black. However, state facilities house nearly 200,000 offenders, of which 31.2% are Black, with Federal prisons holding a collective 76.5% Black and Hispanic population. African-Americans comparatively compose the smallest percentage of the total population, yet the highest of inmates in all prisons.

DPA reports express that black males “experience discrimination at every stage of the judicial system”³⁷, with Human Rights Watch data revealing they are 10.1 times more likely to be imprisoned for drug offenses³⁸ than White counterparts. The social impact of this disparity is emotive: it is not a case of more black males using drugs, but rather, racial stereotyping meaning they suffer disproportionate imprisonment³⁹. By impacting their chances of success in the labour market, the effect is increased social division and income inequality, where ghetto communities are pushed further behind.

³⁵ Statista, "U.S. Population: Ethnic Groups In America 2015 And 2060 | Statistic", *Statista*, 2019 <<https://www.statista.com/statistics/270272/percentage-of-us-population-by-ethnicities/>> [Accessed 25 May 2019].

³⁶ E. Ann Carson, PhD, "Prisoners In 2016", *US Dept Of Justice: Bureau of Justice Statistics*, 2018, pg.7 <<https://doi.org/NCJ 251149>> [Accessed 17 May 2019].

³⁷ Drug Policy Alliance, "The Drug War, Mass Incarceration And Race", *Drugpolicy.Org (From Roy Walmsley, World Population List, 10Th Ed.)*, 2018 <http://www.drugpolicy.org/sites/default/files/drug-war-mass-incarceration-and-race_01_18_0.pdf> [Accessed 27 May 2019].

³⁸ HRW, "Decades Of Disparity | Drug Arrests And Race In The United States", *Human Rights Watch*, 2009 <<https://www.hrw.org/report/2009/03/02/decades-disparity/drug-arrests-and-race-united-states>> [Accessed 25 May 2019].

³⁹ Ojmarrh Mitchell and Michael S. Caudy, "Examining Racial Disparities In Drug Arrests", *Justice Quarterly*, 32.2 (2013), 288-313 <<https://doi.org/10.1080/07418825.2012.761721>>.

7.2.5 INFORMATION ASSYMETRY IN THE DRUG MARKET

Finally, since drug transactions are fast and secretive, this provides the perfect situation for information failure⁴⁰. Whilst suppliers know the contents of their product, consumers are oblivious and unable to deduce its quality until too late. Here, dealers are again given power, in the form of knowledge, and since demand is inelastic and immediate effects are short-lived, these information disparities often go unnoticed. It is ultimately government prohibition that has forced this unregulated, black market to form. Therefore, some states have addressed the issue, with California opening its first open heroin injection site in San Francisco⁴¹. The facility allows drugs to be quality-control checked, hence reducing fatalities not by targeting the quantity of users, but rather the quality of narcotics.

7.3 THE IMPACT OF INDEPENDENT STATE DRUG POLICY

Still, whilst Federal Drug Policy has clearly inflicted significant societal costs, economists are equally concerned with the opportunity cost of policy decisions. Since current law enforces complete prohibition, the next best alternative we can analyse is the differing law followed by individual states. Hence, I studied data surrounding State Policy in Washington, where the taxed sale of recreational cannabis is permitted.

7.3.1 THEORY: HYPOTHECATED AD-VALOREM TAX

Since cannabis is a demerit good, the Washington Government has imposed a 37% levy on all Marijuana and THC sales⁴². This exploits the Law of Demand, with increased prices aiming to lower consumption. However, they are simultaneously tackling addiction problems by reinvesting tax revenue into treatment research, drug education and rehabilitation centres – this is a hypothecated tax.

⁴⁰ Geoff Riley, "Information Failure: The UK Illicit Drug Market | Economics | Tutor2u", *Tutor2u*, 2011 <<https://www.tutor2u.net/economics/blog/information-failure-the-uk-illicit-drug-market>> [Accessed 26 May 2019].

⁴¹ Camelot Daily, "CALIFORNIA: S.F. Opens Nation's First Heroin Injection Sites To Help Struggling Illegal Alien Heroin Dealers - Camelot Daily", *Camelot Daily*, 2019 <<http://camelotdaily.com/san-francisco-open-nations-first-heroin-injection-sites/>> [Accessed 5 October 2019].

⁴² Washington Department of Revenue, "Taxes Due On Marijuana | Washington Department Of Revenue", *Dor.Wa.Gov* <<https://dor.wa.gov/find-taxes-rates/taxes-due-marijuana>> [Accessed 26 May 2019].

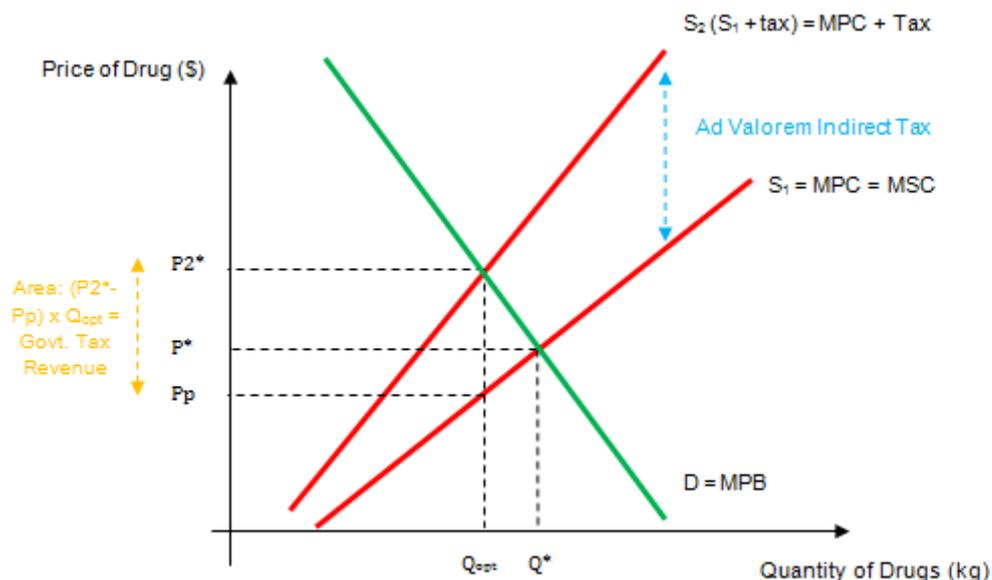


Fig.6 Impact of Ad Valorem Tax on US market for narcotics

Fig.6 depicts the desired impact of the ad-valorem tax, where consumption is reduced from Q^* in the free market to Q_{opt} . Although the tax won't make $MPB=MSC$, it will make $Q_d =$ the allocatively efficient Q_d , as society desires. Moreover, since demand for narcotics is inelastic, this means the tax incidence is felt most by consumers, potentially being internalised.

However, we must appreciate the regressive nature of this tax. Since PED varies with the percentage of one's income spent on a good, the tax disproportionately impacts poorer consumers. Still, this could be a positive unintended consequence, as poorer individuals are less likely to be educated about cannabis' health implications: the tax may target the most-vulnerable consumers.

7.3.2 FINDINGS

While Fig.6 showed that, in comparison to free-market equilibrium, cannabis consumption would be reduced by taxation; in reality, state laws have moved from complete prohibition to legal taxation. Therefore, in Colorado for example, overall cannabis users grew post-2014, though surprisingly, use among 12-17 year olds fell to 9.1% - the lowest since 2008.⁴³ Nevertheless, the most striking figure came from Jeffrey Miron's study⁴⁴, which indicated that in its first year, Washington's marijuana tax raised approximately \$66 million.

Fittingly, Miron expanded his study to the whole narcotics market. By predicting narcotic consumption in every state if legalised, before applying a universal 45% ad-valorem tax, he concluded that the potential tax revenue that could be raised across the USA would total **\$58.8 billion**.

Therefore, my research suggests that when the opportunity cost of drug interdiction (\$58.8 billion) is paired with the direct cost of current prohibition actions (\$47.3 billion), the total societal cost of Recreational Drug Policy is approximately **\$106.7 billion**.

⁴³ EMCDDA, "Colorado Publishes Latest Statistics On Impact Of Cannabis Legalisation | Wwww.Emcdda.Europa.Eu", *Emcdda.Europa.Eu*, 2018 <http://www.emcdda.europa.eu/news/2018/colorado-publishes-latest-statistics-on-impact-of-cannabis-legalisation_en> [Accessed 26 May 2019].

⁴⁴ Jeffrey Miron, "The Budgetary Effects Of Ending Drug Prohibition", *Cato Institute - TAX AND BUDGET BULLETIN NO. 83*, 2018 <<https://www.cato.org/publications/tax-budget-bulletin/budgetary-effects-ending-drug-prohibition#full>> [Accessed 26 May 2019].

8 – CONCLUSION

From the paper's outset, I emphasised that my research question was closely related to the issue of government failure. Therefore, it was crucial to explore both the reasons why prohibition may be required, as well as the ways in which it has influenced communities nationwide.

Hence, the most intuitive way to make a judgment on the policy's effectiveness is to examine the problem from an economist's viewpoint, looking at monetary figures. Section 5 calculated the value of narcotic externalities to be **\$137 billion per annum**, while Section 6 showed that current policy costs the USA **\$106.8 billion per annum**. This implies that the societal cost from drug consumption exceeds the cost inflicted from poor intervention, by **\$20.2 billion**.

However, though this essay is quantitative throughout, the social implications of prohibition law cannot be overlooked. Indeed the disproportionate impacts on black families can be observed and resultant income inequality quantified; yet these costs have much deeper psychological impacts, which cannot be given monetary value. Due to the common root of these issues being government intervention, this study ultimately concludes that **US Federal Drug Policy has led to Government Failure**.

Portugal decriminalised the possession and consumption of all illicit substances in 2001, with fines and doctor's appointments replacing imprisonment, and the following years saw dramatic falls in problematic drug use.⁴⁵

As the famous libertarian economist, Milton Friedman, would have said:

"One of the great mistakes is to judge policies by their intentions rather than their results."⁴⁶

⁴⁵ Susana Ferreira, "Portugal's Radical Drugs Policy Is Working. Why Hasn't The World Copied It?", *The Guardian*, 2017 <<https://www.theguardian.com/news/2017/dec/05/portugals-radical-drugs-policy-is-working-why-hasnt-the-world-copied-it>> [Accessed 26 May 2019].

⁴⁶ YourDictionary, "Milton Friedman Quotes", *Yourdictionary*<<https://quotes.yourdictionary.com/author/milton-friedman/159385>> [Accessed 26 May 2019].

9 – EVALUATION

9.1 OVERARCHING ISSUE

Evidently, the research question I attempted to investigate tackled a problem of significant complexity and scale. Thus, given the limited length of this essay, this topic may have been too broad to be fully done justice to.

For this reason, I had initially considered examining the success of drug policy in Birmingham, UK. This would have also made primary research much simpler to control. Unfortunately, following research, it was apparent that the practical nature of a local study wasn't supported by the limited availability of data.

Therefore, having eventually chosen to dissect US Drug Law, it is vital to reflect upon the strengths and limitations of my study.

9.2 STRENGTHS

I believe the study's strongest aspect lies with its inherent quantitative nature, as the constant use of figures allowed relative comparisons to be drawn between narcotic externalities and costs of interdiction, thus reducing the degree of speculation.

Also, though very demanding, the examination of the USA was effective. Not only did the wide accessibility to data make it easier for me to conduct analysis and draw relevant conclusions, but the USA also allowed me to explore the implications of differing Federal and State Drug laws.

Finally, I think the nature of my methodology and volume of research I carried out was a great strength of this investigation. I consulted a plethora of sources, ensuring to follow IB guidelines surrounding their reliability, but most notably conducted two pieces of independent primary research.

9.3 LIMITATIONS

A key limitation in Section 5 was that although many sources publish values for the externalities of illicit drugs, ultimately some costs will always be overstated and others omitted. The value of the US drug market alone is debated,⁴⁷ and hence the value of externalities must be even more uncertain.

A similar problem emerged when evaluating the consequences of government intervention: many impacts are not strictly economic but also psychological, thus making them difficult to quantify.

Finally, the interview with the ED physician was crucial to gain an insight into drug-related healthcare. However, it may not have offered complete information on society's feelings towards drugs. A larger sample size, with randomly selected citizens from varying income ranges, levels of education and experience with drugs could have been more meaningful.

⁴⁷ Tyler Durden, "Top 10 Facts About The U.S. Illegal Drug Market", *Zero Hedge*, 2013
<<https://www.zerohedge.com/news/2013-10-30/top-10-facts-about-us-illegal-drug-market>> [Accessed 26 May 2019].

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11 – APPENDICES

11.1 APPENDIX A

TELEPHONE INTERVIEW – ED PHYSICIAN, TAMPA, FLORIDA

Interview Questions:

- 1) In your experience, what are the most common drug-related emergencies you have had to deal with?
- 2) How would you compare the number of overdose emergencies you receive versus the accidents suffered by those under the influence of narcotics?
- 3) How does the emergency department in the USA function financially? Do lower income individuals receive the same emergency treatment as richer patients, even if they are not able to pay immediately?
- 4) What impact do you feel the total legalisation of narcotics for recreational use would have on
 - a) The Emergency Departments of hospitals around the nation?
 - b) The US healthcare sector as a whole?
- 5) As a member of your local community, what is the general feeling towards the recreational use of illicit drugs in Tampa?
- 6) What impact do you feel government prohibition has had on the welfare of a typical US citizen? Has it solved more problems than it has caused?
- 7) What policy would you opt for if the Federal Government were to reassess their Drug Policy on recreational drugs?

11.2 APPENDIX B

ELECTRONIC SURVEY – CANNABIS USE IN COLLEGE, NEWARK, NJ

Do you currently smoke cannabis on a weekly basis?

If YES, see below

If **NO**, what is the main reason for your avoidance of the drug? (E.g. health impacts, cost, fear of prosecution)

.....
.....
.....

YES

At an average cost of **\$12/g** of cannabis, how many grams of cannabis do you smoke in an average week (recreational use only)?

.....

How many grams of cannabis would you smoke per week if:

- a) Its price fell from \$12/g to \$5/g
- b) Its price fell from \$12/g to \$10/g
- c) Its price increased from \$12/g to \$20/g