

CANNABIS

**Regulate it. Tax it. Support the NHS.
Promote public health.**



**HEALTH
POVERTY
ACTION** 

CANNABIS: Regulate it. Tax it. Support the NHS. Promote public health.

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Introduction

Regulating and legalising cannabis is an idea whose time has come

The so-called ‘war on drugs’ was always built on shaky foundations. Now countries and jurisdictions around the world are dismantling it piece by piece and starting to build a new drug policy architecture that ushers in a new era of health-based policy making fit for the 21st century.¹

Nowhere are the foundations of this new approach to drugs more obvious than in the global movement towards regulated, legalised cannabis markets. And despite the US being the ostensible leader of the ‘war on drugs’, it has been US states at the forefront of this move. Since Colorado and Washington states legalised cannabis for non-medical use in 2012, and Uruguay became the first country to do so in 2013, seven more US states and the District of Columbia have followed in their footsteps.² The results so far, particularly from the US, are generally positive: confounding critics whilst bringing in additional tax income to fund public services.³ And this is just the start: in the summer of 2018 Canada will become the first G7 country to legalise cannabis.⁴

Regulating and legalising cannabis is an idea whose time has come. The UK public supports it too: in recent polls 47% of people support selling cannabis in licensed shops.⁵ Regulation also has the support of a range of groups from across the political spectrum.

It is time for the UK government to catch up with the global shift and take the responsible approach by bringing in a regulated, legal market for cannabis.

It is time to accept that prohibition is not only ineffective and expensive,⁶ but that regulation could – if it is done well – protect vulnerable groups and promote public health. It would also generate both taxes (at least £1 billion annually, but potentially more) and savings, which taken together would mean more resources for health, harm reduction and other public services. It is time for the UK government to catch up with the global shift and take the responsible approach by bringing in a regulated, legal market for cannabis.

To do this the UK government should move primary responsibility for cannabis policy and all other domestic (legal and illegal) drug policy to the Departments of Health (DH) and International Development (DFID)⁷; bring together a panel of experts to develop the most effective model for a regulated market; and establish a Cannabis Regulatory Authority to implement their recommendations. **It is time to act.**



Cannabis Culture CC BY-2.0

Global Marijuana March, Vancouver, 2013. Canada is set to introduce a regulated cannabis market in summer 2018.

The global movement towards cannabis regulation

Countries around the world are changing their approach to cannabis. In 2013 Uruguay became the first country to introduce a regulated cannabis market;⁸ Canada is set to introduce a regulated market in summer 2018;⁹ and New Zealand is set to hold a referendum on legalising recreational cannabis in the next three years.¹⁰ Even in the US – traditionally a hard-line prohibitionist state – nine US states and the District of Columbia have now legalised cannabis for both medicinal and recreational use, and many others have decriminalised possession and/or legalised medicinal cannabis.¹¹

Other countries have also made moves away from prohibition towards legalisation. Spain has decriminalised personal cannabis use and allows non-profit ‘cannabis social clubs’ to produce cannabis for their members.^{12,13} The Netherlands has decriminalised personal cannabis possession and use and has a *de facto* legal cannabis market through the ‘coffee shop’ system.¹⁴ Under this system the production of cannabis remains illegal and it is still necessarily sourced from the criminal market¹⁵ – although this too is changing, with the first pilot of legal domestic production facilities being established at a municipal level.¹⁶

The early indications from the US states where the newly regulated markets are most developed, are that teenage use of cannabis has not risen as

opponents of legalisation had feared,¹⁷ whilst at the same time new cannabis taxes are bringing in vital revenues to help fund public services.¹⁸ Colorado – with a population only slightly larger than Scotland – raised \$247million (£179m) from new cannabis taxes and licence fees in 2017 alone.¹⁹

The size and scope of the changes differ in different places, and the UK will have to develop a specific model that suits our priorities, but the writing is on the wall: **cannabis reform is a matter of when and how, not if.**

Legalising cannabis will allow us to:

- **introduce a regulated market for the recreational use of cannabis**
- **control access to cannabis for young people**
- **reduce the harms caused by the criminal market and mass criminalisation**
- **regulate cannabis in the interests of public health**
- **reduce wasted enforcement expenditure (e.g. police and prison costs related to cannabis offences)**
- **explore the potential benefits and regulation of medicinal cannabis, and**
- **collect tax to support the NHS, public health, and harm reduction programmes.**

Different approaches: Regulated markets, social clubs and decriminalisation

Some countries or jurisdictions have decriminalised cannabis without bringing in a regulated market. Others have gone slightly further, either allowing non-profit ‘cannabis social clubs’ to grow and distribute cannabis to members, like in Spain, or tolerating some retail cannabis sales, as we see in the ‘coffee shop’ system in the Netherlands. There are some benefits of these moves. Decriminalisation reduces wasted enforcement expenditure and reduces the negative effects of criminalisation on users. Spain’s model additionally helps reduce the size of the illicit market and reduces the negative impact of prohibition on individuals – for instance, by reducing exposure to the wider illicit drug market.²⁰ The model in the Netherlands allows for some regulation of products, reduces the size of the illicit market and generates some tax revenues.²¹

However, by falling short of a fully legal, regulated market all of these options have their drawbacks. Decriminalisation alone leaves the criminal market intact as only the use and possession by the end user is decriminalised. Thus, many problems continue: criminals make profit, products are unregulated, production takes place in unsafe and illegal environments, and buyers can easily be exposed to other more risky drugs. The quasi-legal Spanish ‘social club’ model forfeits tax that could be collected, restricts access to certain groups of people, and relies on self-regulation.²² Under the Dutch model too, the production of cannabis still remains illegal – although this is changing – and as such unregulated and dominated by criminals.²³ Ultimately, these models fail to allow us to fully realise the potential benefits of legal regulation in terms of reducing the size and reach of the illicit market and interactions with it by retailers or users (particularly young people), collecting tax income, improving safety and reducing harm.



The Bulldog – the oldest and most well-known coffeeshop in Amsterdam.

Public support for cannabis reform

The UK public supports regulating cannabis: 47% of people support selling cannabis in licensed shops²⁴ and 53% support decriminalisation or legal regulation.^{25,26} Demographics play a role: a majority (52%) of people aged 18-44 support selling cannabis through licensed shops, whilst 37% of those over 65 do.²⁷ Survey research also suggests that, at least amongst younger people and people who use drugs, there is a preference for legal markets that are more, rather than less regulated.²⁸

The legalisation and regulation of cannabis also has the support of influential groups from across the

political spectrum ranging from the Adam Smith Institute²⁹ to the Green Party.³⁰ Experience from the US has also shown that after legalisation in some states, public opinion in other states and the opinion of groups (e.g. Republicans) that had previously opposed legalisation, has moved towards a more favourable view of legalisation.³¹ We could reasonably expect UK public opinion to move further behind legalisation if the issue is framed in the right way – it is about protecting young people, eliminating the criminal market and promoting public health - and if regulation is carried out responsibly and effectively.

Medicinal cannabis

The benefits of many different cannabis-based medicines are well-documented. They have been shown to benefit patients with numerous conditions including chronic pain, anxiety and nausea.³² They can help patients with spasticity, which includes many people living with Multiple Sclerosis,³³ and people with epilepsy.³⁴ In general, however, patients in the UK cannot access cannabis-related medical products because it is a banned substance. (It is worth noting however that the situation is, in reality, more complicated than this: there is one licensed cannabis tincture – Sativex – which is available, but it is only available on the NHS in Wales and too expensive for many people in other parts of the UK;³⁵ CBD oil is available as a food supplement, but not as a medicinal product; and EU citizens can also use cannabis-based medicines acquired abroad in the UK.³⁶) Fortunately, and in part because the law is inconsistent in many ways, there are now louder calls for greater access to wider variety of cannabis-based medicines to be allowed in the UK. In January 2018, Welsh Assembly Members voted to support legalising medicinal cannabis,³⁷ and advocates for reform of medicinal cannabis laws increasingly enjoy cross-party political support.³⁸ This is good news, but the battle for access to cannabis-based medicines is far from won.

This report focuses on the need for a fundamental shift in our approach to drugs, which puts health and harm reduction first. For cannabis, this means legalisation and regulation, for both recreational and medicinal uses of cannabis. Whilst we do not wish to conflate the distinct arguments for medical and recreational use of cannabis, nor confuse the different objectives or regulatory systems required for each, it is also impossible to disentangle them altogether. A legal recreational cannabis market would allow medical users some access by default as they would be able to buy it and self-medicate - but this would not be an optimal solution from a medical point of view and it would not satisfy most patients that would like to be able to access cannabis-based medicines. Clearly both medical and non-medical regulatory systems need to be developed in parallel, mindful of their distinct, albeit sometimes overlapping, regulatory challenges. However, it is not the purpose of this report to explore the cannabis-based medicines issue in extensive detail. For more information see:

- *Cannabis and MS: The Role of Cannabis in Treating MS symptoms*, The MS Society³⁹
- *Marijuana Legalization: What Everyone Needs to Know* by Caulkins, Kilmer and Kleiman
- All Party Parliamentary Group for Drug Policy Reform⁴⁰

Benefits of a regulated cannabis market

The potential benefits of regulating cannabis are significant. There would be the tax income from a regulated market which we would be able to spend on vital public services. And there would also be wider benefits for public health, consumers, the NHS, producers, (ex)-offenders, the criminal justice system, and by extension our whole society.

Understanding health in the broadest sense – as being about much more than the absence of disease, but rather including socio-economic factors that are vital to our health and wellbeing – all of these factors can help improve our health.⁴¹

One way to conceive of these benefits is the ways that that regulation can help by both *reducing harms* caused by cannabis use and enabling us to explore the *potential benefits* of a legal, regulated market.

At the moment we allow criminals to control the market and reap the financial rewards while society bears all the risks and costs associated with cannabis use

Reducing harm	Potential benefits
<p>Restricting access for young people Protecting young people, the highest risk group, from any negative effects of cannabis or high strength ‘skunk’ by making it illegal for them to buy it and reducing the size and reach of the illicit market.</p>	<p>Tax income There would be at least £1 billion in tax income from cannabis taxes – if not more. This could be ringfenced to support the NHS, harm reduction and education programmes.</p>
<p>Better labelling and consumer choice Ensuring that people have ‘consumer information’ and choice about the type and strength of the cannabis they are taking.</p>	<p>Public health gains and savings for the NHS Legalisation <i>could</i> reduce alcohol consumption for some groups of people. This could be a public health gain and save the NHS money.</p>
<p>Safer products We could regulate or limit potency (or nudge people towards using safer products through tax/pricing), reduce the use of adulterants and limit the quantity of heavy metals, pesticides or other harmful products that make it into the final product, ensuring the safety of cannabis users.</p>	<p>Cannabis-based medicines and potential drug costs savings for the NHS As well as the potential health benefits of cannabis-based medicines for patients, studies in the US suggest that when cannabis-based medicines are available it can save money on drugs for treating conditions like chronic pain and nausea.</p>
<p>Reduced ‘gateway’ to harder drugs Regulation could reduce the ‘gateway’ opportunity for criminal suppliers to additionally market more risky (and more profitable) drugs to consumers.</p>	<p>Decriminalisation Legalisation would free up time and resources for the police, courts and prison systems. It would also eliminate the effects of criminalisation on individuals. This would particularly benefit black and Asian communities that are disproportionately affected by current drug policy.</p>
<p>More effective harm reduction Providing better access to health and risk reduction information via trained vendors and point of sale information. This would help people minimise their exposure to any risks of taking cannabis.</p>	<p>Eliminating human rights abuses We would be able to regulate production as in other industries – ensuring that human rights are protected and labour standards are met in the production of cannabis.</p>

Reducing harm

Restricting access to young people

Prohibition is incredibly ineffective at restricting access to cannabis for the most vulnerable groups – particularly young people.⁴² In England, 6.7% of children aged 11-15 report using cannabis in the last year – although as this is an average it hides the fact that 15.8% of children aged 15 have taken cannabis in the last year.⁴³

Dealers have no reason to restrict access to young people; regulation would allow properly enforced age restrictions to be put in place

Ultimately, the problem with prohibition is that dealers have no reason to restrict access to drugs for young people. Regulation, on the other hand, allows properly enforced age restrictions to be put in place. These controls will inevitably be imperfect, but they will be less imperfect than criminal street markets. This is supported by evidence from the US, where legally regulated markets have been introduced, which shows teen use has not risen⁴⁴ – and has in some cases decreased.^{45,46} In the UK too, when we introduced higher age limits on tobacco, use by teenagers dramatically reduced.⁴⁷ If enforced effectively, regulation would be much more effective at restricting access to cannabis than the current system, where there are no effective controls at all.

Potency, consumer choice and product labelling

The rationale for bringing in consumer information and choice about strength of cannabis through regulation is clear. As things stand cannabis is completely unregulated: anyone can buy it and when they do, they have no idea what is in it or how strong it is. It is like going to a pub where any one of any age can order a pint – and they would not know if they were getting a pint of beer, wine or vodka (and the product could be adulterated in numerous ways too).

Despite decades of prohibition, the law fails to act as a deterrent: 2.1 million people (aged 16-59) in England and Wales used cannabis in the last year alone.⁴⁸ Yet at the moment, we let criminals with no concern for public health control the market, and reap the financial rewards, whilst society bears all the risks and costs associated with cannabis use and its prohibition. None of this makes good policy.

Many concerns around potency have focused on the increasing market saturation of high strength cannabis⁴⁹ – popularly referred to as ‘skunk’ – that has been linked to increased risk of certain mental health problems.^{50,51} ‘Skunk’ has high levels of THC, which is responsible for the ‘high’ of cannabis, and low levels of CBD – thought to have a protective effect against certain mental health risks.⁵² Arguably ‘skunk’ and its market dominance is a product of prohibition itself, as unregulated producers and dealers focus on producing the highest strength varieties of cannabis which offer the greatest profits.⁵³ The impact of prohibition in mutating the market towards ever more risky forms of cannabis is part of the story that is often missing from policy debates.

A regulated market would ensure that people know the strength of the cannabis they’re taking and provide access to lower strength varieties

A legal, regulated market is a responsible way to tackle these prohibition related harms. A regulated market would also allow regulation of THC and CBD levels – potentially limiting THC potency and mandating minimum CBD levels to make cannabis products safer or using tax and/or pricing mechanisms to nudge consumers towards the use of safer products. Alternatively, we could look at personal quotas for cannabis consumption. At the very least, a regulated market would ensure that people can access lower strength cannabis should they choose to (currently ‘skunk’ is often the only option on the illegal market⁵⁴) and ensure much better ‘consumer’ information so that people would know the strength of the cannabis they were taking how to minimise their risk exposure. This should lead to less risky behaviour.

Safer products

In addition to the possibilities of bringing in potency regulations that would limit the THC content or mandate a certain CBD content (or at the very least provide consumers options and information about these things or encourage or deter certain behaviors through tax/price mechanisms), a regulated market would ensure that we could regulate and monitor the ways that products are made. This would mean that we could test products and ensure that the final product contains safe levels of heavy metals, microorganisms, or residuals of pesticides or other chemicals used in production.⁵⁵ Regulation and

product testing would also ensure that products are not treated with adulterants that can be harmful as commonly happens now.⁵⁶

More effective harm reduction

Regulation will ensure that people taking cannabis have better access to health and risk reduction information via trained vendors and point of sale information. Again, the reference point is the current system of prohibition where the information about the risks associated with drug use and how to mitigate them are non-existent at the point of sale or use. By ensuring that vendors dispense information about how to take cannabis responsibly (for example, not using it with tobacco or using cannabis with a high CBD content), we will be able to ensure that people who use cannabis have the knowledge, skills and ability to minimise the risks of taking cannabis. We could also ensure that cannabis is not sold in the same premises as alcohol to minimise risks of people using cannabis with alcohol.

Regulation would ensure that people have the knowledge, skills and ability to minimise the risks of using cannabis

There are pros and cons of all these ideas, but regulation would give us the necessary levers to promote harm reduction. In addition, we will be able to collect more accurate information about cannabis use in order to target harm reduction initiatives effectively and we would be able to improve public and school-based education about cannabis use too, using some of the tax revenue generated from cannabis sales and licenses.

Potential to reduce the 'gateway effect'

The gateway effect, whereby it is assumed that using cannabis will lead to other, more risky drugs use is often overstated, reflecting fear-mongering more than science.^{57,58} If there is a 'gateway effect' it is most likely to be via the illegal market, created by prohibition, in which criminal dealers have an profit incentive to introduce users to other drugs.^{59,60}

Regulation of cannabis *could* potentially reduce any such effect, as users would no longer be in contact with criminal dealers.⁶¹

Potential benefits

The tax generated from regulating cannabis is dealt with below (see pp. 13-14). In addition to this there are numerous other potential benefits of legalising and regulating cannabis.

Public health gains and savings for the NHS

Regulating cannabis could yield additional public health benefits – and potentially save the NHS money too. Whilst there is disagreement in the literature about the ways that alcohol and cannabis use could interact⁶² – and the issue is complex – there is some evidence from the US that regulating cannabis and bringing in a market for medicinal cannabis products could bring alcohol use down.

A recent study in the US suggested that alcohol sales decreased by 15% in places where medicinal cannabis was available

For instance, in the US, a recent study suggested that alcohol sales decreased by 15% in places where medicinal cannabis was available.^{63,64} Whilst it is too early to infer from this that bringing in a *recreational* market for cannabis would reduce alcohol use⁶⁵ (although we would hope to see recreational and medicinal cannabis regulations developed in parallel), it is worth noting that some evidence from Colorado, where cannabis for recreational use and medicinal use is legal, appears to show that alcohol use by people aged 18-25 dropped 4% between 2014-15 and 2015-16.⁶⁶

Whilst there is some evidence that reduced alcohol consumption may be the result of people substituting cannabis, it should be borne in mind that the Independent Scientific Committee on Drugs found that cannabis is significantly less dangerous to both consumers and wider society than alcohol.⁶⁷ This risk differential means that even if there was a marginal increase in cannabis consumption after legalisation, any corresponding drop in alcohol use would potentially lead to population level public health gains – and savings for the NHS.⁶⁸

This is not to suggest that alcohol use will definitely reduce if we legally regulated cannabis in the UK. The issue is complex, and although some of evidence points in a positive direction the effect of this on population health and the NHS will depend on exactly who reduces their consumption of alcohol and by how much, if at all.

However, if cannabis was regulated we could also take action to prevent or mitigate any potential negative effects of the substitution effect, take steps to try to mitigate people using cannabis with alcohol, and take steps to limit any increase in overall cannabis consumption. For instance, we could try to deter people from using high strength cannabis through tax and pricing mechanisms or THC limits, and we could educate people about different ways to take cannabis that don't involve smoking. We could even look at personal quotas for cannabis consumption and ensure that cannabis is not sold in the same premises as alcohol to mitigate both being used at the same time. There are pros and cons for all of these ideas, which regulators would have to balance with various other considerations, but regulation would give us the necessary levers to try and address these issues, and if it is done well we could see public health dividends.

Cannabis-based medicines and potential drug costs savings for the NHS

If we assume that we legalise and regulate medicinal cannabis-based medicines (as has been recommended in a report presented by the APPG on Drug Policy Reform) alongside a legal non-medical cannabis market, there would be benefits for patients and potential savings for the NHS on drugs used for pain relief or to treat conditions such as anxiety or nausea.⁶⁹

In the US it has been shown that the Medicaid fee-for-service program saved \$475.8m in 2014 on prescription drugs as a result of medicinal cannabis being available

Again, looking to the US where medicinal cannabis is now quite widely used, it has been shown that the Medicaid fee-for-service program saved \$475.8m in 2014 on prescription drugs as a result of medicinal cannabis being available.⁷⁰ This is without medicinal-use cannabis being legal in all US states, and only for a part of the Medicaid programme. If medicinal cannabis was legal everywhere in the US and this saving was applied across the whole Medicaid programme (rather than just the fee-for-service programme) then it was suggested that Medicaid could have save \$3.89 billion on prescription drugs in 2014.⁷¹ The cost implications of medical cannabis for the NHS would depend on many factors, but

this certainly indicates that there are potential cost savings available, as well as the potential medicinal benefit to patients that could use medicinal cannabis products that might be more suitable to treat their conditions than prescription drugs.

Benefits of decriminalisation

Criminalisation and incarceration are unhealthy. Prisons are clearly unhealthy environments, with evidence of high drug use and drug related violence.⁷² Incarceration also has negative long-term effects on a persons' health and wellbeing, by, for instance, making it harder to get work⁷³, housing⁷⁴ or personal finance⁷⁵ on release from prison. But under a new legal system, where cannabis possession and licensed supply are no longer criminalised, we could expect people who may have got criminal records or gone to prison under the old system to be more likely to be in work and have better life chances. This would potentially help these people to live more fulfilling lives and improve their health. If we also took the opportunity to overturn previous convictions for cannabis possession, many more people could potentially find it easier to access work too. The effects of reduced criminalisation and incarceration for cannabis offences would particularly help black and minority communities who are consistently more likely to be arrested and charged for cannabis-related offences than white peers.⁷⁶

Under the new system people previously criminalised for possession or supply of cannabis could even be supported to enter the legal cannabis market to help them overcome the effects of previous criminalisation (see p. 18). This could also help eliminate any remaining criminal market.

It has been estimated that legalisation would save a total of £291 million across the police, court, prison and probation services in England and Wales alone

If cannabis were legalised then it would also free up valuable resources in the police, prison and the judicial systems to help those services address more serious or violent crime. It has been estimated that legalisation would save a total of £291m across the police, court, prison and probation services in England and Wales alone.⁷⁷ This would mean that resources could be targeted at more serious and violent crimes and reduce the overall prison burden.

Ending human rights abuses in cannabis production

We consistently hear stories about people – particularly children – who have been trafficked into the UK and forced to work effectively as slaves, in unsafe environments, to produce cannabis for the criminal market.⁷⁸ The NSPCC has referred to cannabis produced in the UK in this way as “blood

cannabis.”⁷⁹ Clearly, this is a by-product of prohibition which gives criminal gangs control of the market and the incentives to enslave children to produce cannabis.⁸⁰ At the very least, regulation would ensure that we could bring producers into the legal market, ensuring that cannabis is not produced by (enslaved) children. But it would also mean we could go much further and ensure that producers pay the Living Wage and adhere to high labour and health and safety standards.

Will cannabis use go up if we legalise?

Opponents of legal regulation raise legitimate fears that cannabis consumption and related health harms might increase if it was legalised, as cannabis could potentially be cheaper and more available. And whilst prohibition has arguably offered few real barriers to consumption – it is easily available to anyone who wants it in the UK⁸¹ – legalisation of cannabis does appear to have led to an increase in consumption for some groups – particularly young adults – in those US states that have legalised recreational use of cannabis.⁸² However, use has been rising in these populations across the US – including in non-legalisation states – and recent research has shown that this increase in use is not due to legalisation in some US states.⁸³ Rather, it is the result of wider socio-economic changes. Nonetheless, we have to accept the possibility that use may increase for some groups of people, even if this is spurred in part by the novelty factor of a newly legal market.

A balanced view needs to weigh any potentially negative impacts, such as potential increased consumption, against the positive effects legalisation can have in terms of reducing criminalisation, decimating the criminal market, generating revenue for public services, improving the quality and safety of cannabis products, and limiting, and perhaps reducing, teenage access to and use of cannabis.

For policy makers, then, the question is two-fold. Firstly, which regulatory model is likely to minimise the risks of (potentially increased) use and reduce harmful using behaviours? As discussed elsewhere, a model that responsibly mitigates against commercial pressures to increase or initiate use, will be very different from an unregulated legal (or illegal) market. Secondly, are any harms that do result from (potentially increased) use outweighed by the potential for other benefits of legalisation? Like all policy issues, it is a question of priorities. Exactly how priorities should be balanced against one another would depend if use goes by up (or down), by how much, amongst which groups, and of which sort of products. However, in the abstract, this question really revolves primarily around the issue of control of access to cannabis. Is use (potentially) going up for some groups better or worse than being able to restrict access to cannabis for the most vulnerable populations; i.e. young people? Given the particular vulnerability of young people restricting access to cannabis for these groups should be a priority and regulation would achieve this more effectively than prohibition.

In addition, as outlined above, there are other benefits of legalisation. In particular: reducing the harm caused by cannabis consumption (through potency regulations, mandatory CBD content, choice about potency, access to information at the point of sale and safer products); the potential tax revenue; reductions in criminalisation, and the cost/resource savings for the police, courts and prison systems. Taken together, these benefits outweigh the negative impact of a marginal (and far from inevitable) increase in consumption for some groups. Moreover, where specific harms do emerge, regulators will be able to intervene to mitigate them – for example through targeted price or taxation controls or targeted education campaigns.

Balancing competing priorities is the key and it is never easy, but we would hope that regulators would work to find a model that can work to maximise the benefits of regulations whilst minimising the harms caused by any additional consumption that may occur.



Protesters at rally against NHS cuts in London, March 2017.

Tax cannabis – fund the NHS

The exact amount of tax income that a regulated cannabis market will bring in will depend on the levels or rate of tax, the amount consumed and the regulatory model that is adopted. Whilst estimates are both possible and useful, the limitations of such estimates should also be acknowledged: they will inevitably be based on imperfect data (not least because existing illegal activities are hard to measure) and will vary depending on the regulatory approach modelled and its impacts on consumption, or, more specifically, demand for legal products, as opposed to any remaining illegal products.

How much tax income could a cannabis market bring in?

The most comprehensive study into a hypothetical legalised cannabis market in the UK was produced in 2011 by Institute for Social and Economic Research (ISER).⁸⁴ ISER estimated that a cannabis tax could bring in between £397m and £871m annually, depending on the demand response and the level of taxation.⁸⁵ The upper estimate was based on taxes levied at 79% of cost price and a demand response that meant most cannabis consumed was taxed. The lowest was assuming taxes levied at 51% and a response that meant much of the market remained untaxed.⁸⁶

More specifically, the different demand responses modelled by ISER ranged from a large increase in consumption of high strength cannabis (which on the ISER model was only available on the criminal market, meaning that the tax take was lower as people still used the criminal market to purchase it) and a moderate increase in use of lower strength cannabis that was still available.

However, there are various reasons why this estimate might be on the conservative side. For instance, the figure was based on an assumption that cannabis with a THC content over 10% would remain illegal, and therefore the criminal market in 'strong' cannabis would persist or even grow.⁸⁷ However, looking at regulatory models developed in the US (where there are no potency limits⁸⁸), in the Netherlands (where a proposed 15% THC limit was never implemented)⁸⁹ and being proposed in the UK (The Liberal Democrat expert panel proposed a range of products from 5-15% THC⁹⁰) this approach looks increasingly unlikely. We are more likely to regulate higher strength cannabis too, albeit potentially using pricing and tax measures to mitigate or deter use of stronger cannabis.

A system similar to the established cannabis markets in the United States could generate as much as £2.26 billion a year from tax and license fees

In addition, the ISER estimates are for England and Wales only. But more importantly perhaps, the ISER estimate was produced before regulation was introduced in the US, so there was not real-world data to compare it to. But if we look at the more established US cannabis markets in Colorado and Washington, it suggests that all things being equal, a similar UK system could generate income (from tax and license fees) of as much as £2.26 billion.^{91,92} If the tax income in the UK was equivalent to that in the Netherlands, it suggests a UK tax haul nearer £1.4 billion.⁹³ And whilst it may be difficult to transition from the illegal market for cannabis that we have now to a regulated market that is taxed as heavily as the alcohol or tobacco industries (some argue that the criminal market might simply persist), it is worth noting that if the cannabis market worked more like the alcohol or tobacco markets in terms of levels of tax income then the tax income from cannabis duties alone (not including VAT or income/corporation taxes), assuming a £7 billion market,⁹⁴ could be conservatively estimated at £1.9 or £3.5 billion respectively.^{95,96}

It should be stressed that these comparisons are only indicative: a direct comparison between the UK and the US is problematic as not only will tax and price regimes inevitably be different, but the US has historically higher consumption rates than the UK. Adjusting for consumption rates is complicated as there are varying estimates for consumption in both jurisdictions and comparing data from different methodologies is always problematic. This is further complicated more recently as data is from different contexts (where cannabis is legal/illegal), which affects reporting of drug use. Furthermore, prevalence or consumption rates is not necessarily the same as the amount consumed (as the intensity of consumption is not being measured), and data on the value of the UK market in terms of amount spent is less robust than actual market data from the US (although it should also be said that we do not have a very reliable estimates of how much of the US market is legal/taxed vs illegal/untaxed). Therefore, regarding comparisons with the tax income from Colorado or Washington, whilst it gives at least an *indication of the potential scale of tax revenue*, any direct comparison necessarily comes with a lot of caveats.

Nonetheless, whilst we do not know exactly how the market will respond to regulation, and whilst we do not know exactly what regulatory model would be used, it would seem a fair assumption that a legal

Potential tax revenues if the UK cannabis market worked like other comparable markets



recreational cannabis market is likely to bring in *at least* £1 billion annually, and it could be much more. Of course, we would not know precisely until we tried it, but the emerging evidence from the US is that reasonable tax contributions and mitigating other health risks is possible.⁹⁷

To put this potential tax revenue in context, the Kings Fund, the Nuffield Trust and the Health Foundation recently said that the NHS needs an extra £24 billion by 2022 in order to keep up with demand for services.^{98,99} Even with the extra £1.9 billion funding given to the NHS for 2018-19 in the autumn budget in 2017, there is still a shortfall for 2018/19, according to the above organisations, of at least £2 billion.¹⁰⁰

Whilst the income from a cannabis tax would not solve all of the problems the NHS faces, it could go a substantial way towards filling some of the current funding gaps.

£1 billion in tax income from a cannabis market would pay the basic salaries of all midwives in England, with money to spare for funding drug education, harm reduction and mental health services

A different way of looking at it would reveal that if a cannabis tax brought in £1.28 billion, and this was ringfenced for the NHS, it would be equivalent to the basic annual salary of *all* 21,890 (FTE) midwives *and* the 20,448 (FTE) ambulance staff in England.¹⁰¹ Even using the oft-cited figure of £1 billion in tax income from a cannabis market,¹⁰² this would pay the basic salaries of all midwives in England, and leave money spare for funding drug education, harm reduction and mental health services.

In addition to the tax income from cannabis-related taxes, there would also be further income from companies that would pay corporation tax and pay for licenses to produce or distribute cannabis, and income tax from people employed in the cannabis-related industries, although these are harder to estimate and would depend on what sort of regulatory system we introduced. There would also be income tax gains because people who would have been criminalised or imprisoned for cannabis-related offences could be economically active and paying taxes. The 2011 ISER

study estimated the benefits to income tax from reduced ‘scarring’ and people not being in prison at £23m and £10m respectively.¹⁰³ All told, cannabis regulation would be a net benefit for the economy, public services and public health.

Additional costs

Of course, there would be some extra costs as a result of legalising cannabis: administering and regulating the industry, enforcing regulations, monitoring quality and potency, providing harm reduction information and public education. There would also potentially be some additional costs for both health and mental health services if harmful consumption increased. However, the savings and tax income would more than offset these new costs.¹⁰⁴

The exact costs of a new policy model are hard to quantify precisely, and would depend on the nature of the policy adopted, and a number of variables relating to the impact of the changes – particularly around consumption rates. However, the impact on mental health services has been modelled, again by the ISER. They predicted that the increased costs or savings for mental health services could vary from a saving of £16m to an extra cost of £41m, depending on the impact of legalisation on consumer behaviours.^{105,106} Even using the upper estimate, the tax income far outweighs the potential costs to mental health services.

However, this should not, in our view, be an issue that should be determined simply on the basis of economic costs. The impact of mental health problems on individuals, communities and families can be enormous and should not be reduced to cost. However, as we have argued regulation would be a better way to tackle and mitigate negative impacts of cannabis use by restricting access to vulnerable youth who are most at risk, providing choice and information to consumers so that people have the chance to mitigate any risks they take, and investing in effective preventions, treatment, and risk education.

What would UK cannabis legalisation mean for other countries?

Whichever regulatory model we choose to implement, if we insist on cannabis consumed in the UK being produced in the UK there is a real danger that the move to a regulated cannabis market could have a negative impact on producers in other countries. Even though 75% or more of the cannabis consumed in the UK is now grown in the UK,¹⁰⁷ there is still a significant amount of cannabis (particularly hash/resin) that is imported. Most of this is from North Africa, and particularly Morocco, the world's largest producer of cannabis resin (hash).¹⁰⁸ Many Moroccan farmers, indeed entire communities and regions, depend on this international market for a substantial proportion of their income. Were a shift to entirely domestic production following legalisation to undermine these markets, the impact on these long-established economies and livelihoods could be devastating.¹⁰⁹

Recent developments in Lesotho,¹¹⁰ have also shown that some countries in the Global South may respond to reforms by granting licenses to allow companies to export cannabis to reforming jurisdictions or countries. However, by only granting licenses to foreign-owned multinational corporations, moves such as those in Lesotho risk actively undermining local development efforts by excluding farmers who already produce cannabis for the illicit market from enjoying any benefits of these developments.

Taking away a primary source of income for small scale traditional farmers – either by insisting on domestically produced cannabis in key consumer countries such as the UK or limiting future access to production and export opportunities from developing countries to large multinational corporations - could undermine the UK government's commitment to poverty reduction and sustainable development in vulnerable regions.¹¹¹

The UK is well positioned to take a lead in ensuring that the development dimension of the emerging cannabis trade is considered as part of the process of moving towards a regulated cannabis market. As the Transnational Institute has suggested, whilst renegotiating the International Treaty Framework on drug control might be diplomatically impossible, we could look at developing bilateral exceptions to the International Treaty Framework using Article 41 of the 1969 Vienna Convention on the Law of Treaties (VCLT). This – at least in theory – gives states the option “to modify treaties between certain parties only, offering in this context an intriguing and under-explored legal option.”¹¹²

The UK government should ensure that any international trade in cannabis or hash benefits those farmers that have often been growing cannabis for generations and are reliant on this income. Cannabis legalisation should be viewed as a potential opportunity to help small scale farmers in poor countries. There are precedents that point to how this could occur; In Turkey for example small scale illicit opium farmers have been successfully licensed to produce opium for the medical market under the auspices of a government regulatory agency and a strictly controlled market.¹¹³

Viewed in this context, it is essential that the Department for International Development (DfID) is involved in all discussions on moving to a regulated cannabis market in the UK.

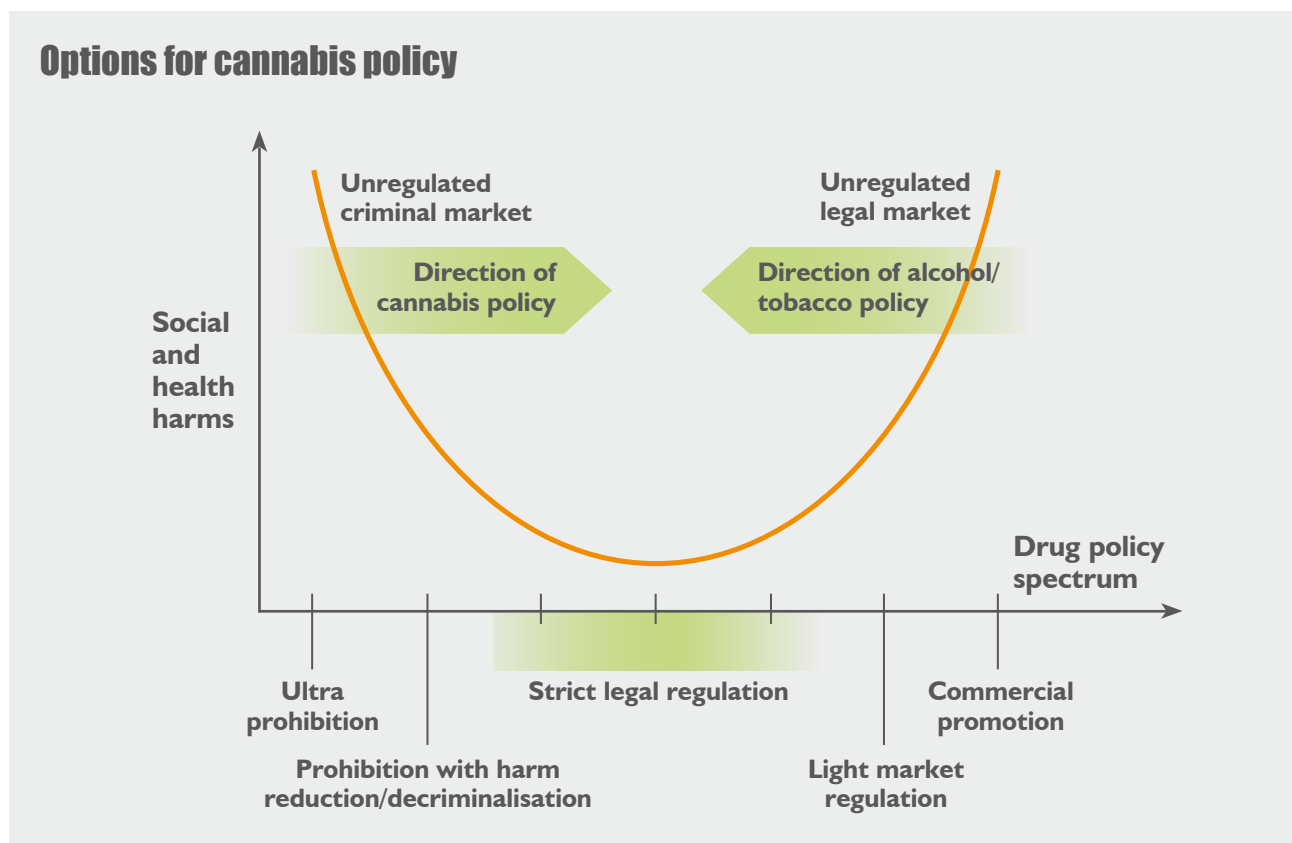
How to regulate: responsible regulation for public health

Regulation is fundamentally about the management and reduction of risk – it is one of the primary functions of government. All drug use involves some degree of risk and all drugs should be regulated in accordance to the risks they present.

Various NGOs (e.g. Transform,¹¹⁴ Rand¹¹⁵), public health groups (e.g. Health Officers of British Columbia¹¹⁶) and now government task forces (e.g. Canada¹¹⁷) have given considerable thought to the detail of what an effective regulatory cannabis model should look like.

We do not offer a prescriptive view of what regulatory choices the UK should make. The exact type of regulation is a matter that will have to be informed by consultation with key experts and stakeholders, including people who use cannabis, the wider public, the NHS, public health organisations, trade unions, the police and multiple government departments. This will entail finding a balance between potentially conflicting priorities. Difficult decisions will have to be made, and compromises struck.

As an example, if we want to prioritise eradication of the illegal market then reducing prices and regulatory barriers would help to deliver this objective. However, if this was achieved by reducing prices so cannabis was much cheaper than it is now and making cannabis much more easily available than it currently is, it could reduce tax income (assuming a tax was based on a % of sale price) and potentially be at odds with public health objectives by incentivising increased consumption. On the other hand, if we want to moderate use, particularly of more risky cannabis products such as high potency ‘skunk’ then we might regulate potency, through THC caps or price mechanisms, for example introducing minimum prices and increasing prices for more potent and risky products. This *might* – depending on other factors such as availability and the type of enforcement – mean the illegal market for these goods persists. Regulation is about balancing these trade-offs.



Reproduced from Transform (2016), 'How to Regulate Cannabis: A Practical Guide: 2nd Edition' (p.29)

Goals of new cannabis regulations

It is important to be clear what we want from a policy and the following goals should guide decision making about the sort of regulatory model we should introduce in the UK. We suggest the following four principles should guide moves towards regulation:

- 1. Protect the young and vulnerable**
Through effective enforcement of age-related restrictions
- 2. Protect and promote public health**
Through safer products, and encouraging safer behaviours
- 3. Reduce drug-related crime**
By reducing or eliminating the illegal market in cannabis
- 4. Provide value for money**
By delivering desired outcomes for the minimum net costs to tax payers by raising tax revenues and reducing the costs for the police and court systems

In order to achieve these goals, regulators will have to be open to experimenting, use robust data to identify the impact of their policies, and be flexible to allow them to evolve in line with emerging evidence. Fortunately, we can learn from the US, Uruguay, Canada, Spain, the Netherlands and other reforming jurisdictions, as well as from our own experiences of bringing tougher more effective regulation in to alcohol and tobacco markets. This will help us avoid the pitfalls of over-commercialisation and ensure we are prepared to meet the challenge of designing an appropriate and effective regulatory model that works for the UK.

How regulation can promote social justice

Establishing a new legal market is a golden opportunity to create a market geared towards improving social justice. This can be achieved with simple policies to promote inclusion and avoid over-commercialisation:

- **Ex-offenders who had been criminalised by the prohibition of cannabis should not be banned from taking part in the new cannabis market**, as has happened in Colorado.¹¹⁸ Rather, ex-offenders should be encouraged to benefit from this new market. This could be achieved by prioritising this group for access to production or sale licences as has happened under the “social equity programme” in Los Angeles, California¹¹⁹ and in a similar scheme in Massachusetts which prioritises business applicants who have a majority of employees with previous drug-related convictions.¹²⁰ This could help eliminate the criminal market in cannabis, as well as helping people overcome the effects of criminalisation.
- **Small scale producers – both in the UK and abroad – should be given the opportunity to take part in the market.** This would mean making attempts to avoid the over-commercialisation, monopolisation, or regulatory capture of a new cannabis market by large corporations and support the aims of the Department for International Development. This could be achieved through conditionalities on production licences (e.g. limiting the size of individual market operators, and/or ensuring that fees are not so high that they are a barrier to small scale producers entering the market) as well as ensuring that the international dimensions of the cannabis trade are addressed (see p. 16).

What's next?

The UK government should move primary responsibility for cannabis policy and all other domestic (legal and illegal) drug policy to the Department of Health (DH). This will put policy making where the relevant competences lie, and demonstrate that health, harm reduction and community safety is the priority. There will naturally remain a cross departmental brief – with roles for the Department of Business, Energy and Industrial Strategy, the Treasury (tax collection), and the Home Office (regulatory law enforcement, and illegal activities outside the parameters of the legal framework). The Department for International Development (DFID) should also play a joint role in supporting the DH in order to align domestic and international drug policies with the Sustainable Development Goals (SDGs) and ensure coherence with both the UK government's approach to advocacy at global institutions and the government's commitment to development.¹²¹

To set up a regulated cannabis market the UK government will need to:

- Bring together experts and decision makers to decide on the outcomes we want and how to measure them, as well as the precise contours of the regulatory model needed to achieve those goals.
- Set up a Cannabis Regulatory Authority to implement the policy recommendations of the panel of experts.

The focus for the UK government should be how we regulate cannabis, not if.

The benefits of a legal, regulated cannabis market

Public services

Government can collect tax revenue, meaning more money for public services like the NHS. This would be at least £1 billion a year – but potentially more.¹²²

Saves time and money spent on policing, courts and custody related to cannabis offences. It has been estimated that we would save a total of £291m across the police, court, prison and probation services in England and Wales alone if cannabis was legalised.¹²³ This would free up resources to tackle serious and violent crimes and reduce pressure on the prison system.

If the medicinal use of cannabis was approved alongside a recreational regulated market, cannabis-based medicines could be used to treat a wide range of medical conditions or symptoms such as chronic pain, nausea, spasticity and anxiety.¹²⁴ In addition to the benefits to patients, this could potentially save money that the NHS currently spends on more expensive and/or less effective medication.¹²⁵

Producers

The supply chain can be regulated ensuring growers/producers do not engage in trafficking, pay the Living Wage and respect hygiene standards in the same way as other consumer goods producers. Small scale producers, both in the UK and abroad, and those people most affected by criminalisation could be supported to enter – and benefit from – the new UK cannabis market.

Public health

Young people (e.g. under 18) would not be able to legally purchase cannabis. The evidence from reforming states in the US shows that legalisation has not led to increases in teenage consumption and has arguably led to a decrease in consumption rates in some cases.¹²⁶ This would improve health and wellbeing by reducing the exposure of young people to the risks associated with adolescent cannabis use.¹²⁷

Whilst it is yet to be firmly established, there is some evidence that regulated cannabis markets, and particularly the availability of cannabis-based medicines *may* help reduce alcohol consumption, as people may substitute cannabis use for alcohol use.^{128,129} If this is the case, this would be a net public health gain because of the relative harms caused by cannabis compared to alcohol.¹³⁰ Because alcohol-related conditions cost the NHS so much money any reduction in alcohol use would also save the NHS money.

THC and CBD content in cannabis products would be regulated and clearly labelled on all products. This would help people ensure they are taking cannabis of a known strength. The government could make cannabis products safer by establish potency limits (as they do for alcohol), regulate to stop more risky high strength cannabis from being sold, and/or mandate minimum CBD content, which can mitigate the harmful effects of THC.¹³¹ This could reduce the harms caused by cannabis consumption.

Whilst the ‘gateway’ drug theory of cannabis is overstated,¹³² regulation could nonetheless reduce the opportunity for criminal suppliers to additionally market more risky (and more profitable) drugs, as licensed retailers would only be selling cannabis.¹³³

Society

Legal regulation would reduce a source of income for gangs or organised crime and reduce street dealing and related violence and disorder, making our streets safer for all.

Ending the criminalisation of cannabis users, suppliers and producers would help people who have been or would have been criminalised live healthier and more fulfilling lives. This would particularly benefit those groups that are disproportionately affected by current drug policy – marginalised and vulnerable populations, people who use drugs, and people from minority ethnic groups.¹³⁴

Economy

There would be an economic benefit of bringing the cannabis market into the legal economy. This would create markets for recreational cannabis products, creating jobs and new supply chains in the process.

Each person in jail is one less person who could be potentially active: working, earning money and paying tax. Those who have been in prison for or charged with cannabis-related offences often find it harder to find or stay in work as a result of criminalisation too.¹³⁵ Decriminalisation, and wiping cannabis related offences from the criminal records of those previously criminalised for cannabis-related offences, would help the economy and society, as well as the individuals affected, by helping more people get into work. The benefit of this has been estimated at £33m a year in extra tax revenues.¹³⁶

References

1. Health Poverty Action (2018) 'Building a 21st Century Approach to Drugs' Available online: https://www.healthpovertyaction.org/wp/wp-content/uploads/2018/01/Building-a-21st-century-approach-to-drugs_briefing2018.pdf
2. Levenson, E. (January 23, 2018) 'Vermont becomes first state to legalize marijuana through legislature' *CNN*. Available online: <https://edition.cnn.com/2018/01/22/us/marijuana-vermont-legal/index.html>
3. Transform, (2015) 'Cannabis regulation in Colorado: early evidence defies the critics' Available online: www.tdpf.org.uk/blog/cannabis-regulation-colorado-early-evidence-defies-critics
4. Eleftheriou-Smith, L. (Tuesday 28 November 2017) 'Canada one step closer to legalising marijuana after legislation moves to Senate' *The Independent*. Available online: www.independent.co.uk/news/world/americas/canada-marijuana-legalisation-closer-legal-senate-weed-cannabis-decriminalise-justin-trudeau-a8080051.html
5. Grice, A. (9 April 2016) *The Independent*, 'Cannabis legalisation: 47% support sale of drug through licensed shops, poll reveals' Available online: <http://www.independent.co.uk/news/uk/home-news/legalising-cannabis-47-support-sale-of-drug-through-licensed-shops-poll-reveals-a6976796.html>
6. Transform (2009) 'A Comparison of the Cost-effectiveness of Prohibition and Regulation of Drugs' Available online: www.tdpf.org.uk/sites/default/files/Cost-Effectiveness.pdf
7. Health Poverty Action (2018) 'Building a 21st Century Approach to Drugs' Available online: https://www.healthpovertyaction.org/wp/wp-content/uploads/2018/01/Building-a-21st-century-approach-to-drugs_briefing2018.pdf
8. Transform, (2016) *How to Regulate Cannabis A Practical Guide: 2nd Edition* Available online <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabis-practical-guide> p. 19.
9. Eleftheriou-Smith, L. (Tuesday 28 November 2017) 'Canada one step closer to legalising marijuana after legislation moves to Senate' *The Independent*. Available online: www.independent.co.uk/news/world/americas/canada-marijuana-legalisation-closer-legal-senate-weed-cannabis-decriminalise-justin-trudeau-a8080051.html
10. BBC News (2017 October 20, 2017) 'New Zealand to hold cannabis referendum within three years' Available online: www.bbc.co.uk/news/world-asia-41693728
11. Governing, State Marijuana Laws in 2018 Map, available at: <http://www.governing.com/gov-data/state-marijuana-laws-map-medical-recreational.html>
12. Transform, (2016) 'Cannabis social clubs in Spain: legalisation without commercialization', Available online: <http://www.tdpf.org.uk/resources/publications/cannabis-social-clubs-spain-legalisation-without-commercialisation>
13. Transform, (2016) *How to Regulate Cannabis A Practical Guide: 2nd Edition* Available online <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabis-practical-guide> p. 65.
14. Transform (2014) Cannabis policy in the Netherlands: moving forwards not backwards Available online: <http://www.tdpf.org.uk/blog/cannabis-policy-netherlands-moving-forwards-not-backwards>
15. Transform, (2016) *How to Regulate Cannabis A Practical Guide: 2nd Edition* Available online <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabis-practical-guide> p. 237.
16. New Dutch cabinet to run trials in regulated marijuana production (October 8 2017), *dutchnews.nl*, Available online: <http://www.dutchnews.nl/news/archives/2017/10/new-dutch-cabinet-to-run-trials-in-regulated-marijuana-production/>
17. Transform, *Cannabis regulation in Colorado: early evidence defies the critics*, 2015. Available online: <http://www.tdpf.org.uk/blog/cannabis-regulation-colorado-early-evidence-defies-critics> See also: Ingraham, C. The Washington Post, December 11, 2017. 'Following marijuana legalization, teen drug use is down in Colorado.' Available at: <https://www.washingtonpost.com/news/wonk/wp/2017/12/11/following-marijuana-legalization-teen-drug-use-is-down-in-colorado>
18. Transform, *Cannabis regulation in Colorado: early evidence defies the critics*, 2015. Available online: <http://www.tdpf.org.uk/blog/cannabis-regulation-colorado-early-evidence-defies-critics>
19. Colorado Department of Revenue. Available online: <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data>
20. Ibid. p.37
21. Ibid. p.36
22. Ibid. p.37
23. Ibid. p.36
24. Grice, A. (9 April 2016) *The Independent*, 'Cannabis legalisation: 47% support sale of drug through licensed shops, poll reveals' Available online: <http://www.independent.co.uk/news/uk/home-news/legalising-cannabis-47-support-sale-of-drug-through-licensed-shops-poll-reveals-a6976796.html>
25. Transform, 'Changing Public Opinion' Available online: <http://www.tdpf.org.uk/campaign/changing-public-opinion>
26. Another poll by Yougov in 2015 (<https://yougov.co.uk/news/2015/03/19/support-for-legal-pot-not-so-high-Britain/>) suggested that 46% of people opposed 'legalising and taxing' cannabis, whilst 40% supported the idea. The same poll suggested that 49% opposed cannabis legalisation. The language used appears to have some impact on results of opinion polls. The public appears more inclined to support 'regulation' or 'licenced shops', than 'legalisation', which, which may imply less regulation.
27. Grice, A. (9 April 2016) *The Independent*, 'Drug legalisation: Poll reveals generation gap as young adults turn their back on narcotics' Available online: <http://www.independent.co.uk/news/uk/home-news/drug-legalisation-poll-reveals-generation-gap-as-young-adults-turn-their-back-on-narcotics-a6976811.html>The figure of 52% of 18-44 year-olds who support selling cannabis through licensed shops is an average of the three age groups (18-24;25-34;35-44) mentioned in this piece.
28. Global Drugs Survey 2017 (2017) Available online: <https://www.globaldrugssurvey.com/gds2017-launch/results-released/>
29. Adam Smith Institute (2016) UK Drugs Policy an Embarrassment, We Must Modernize. Available online: <https://www.adamsmith.org/news/uk-drugs-policy-an-embarrassment-we-must-modernise-and-legalise>

30. The Green Party, Drug Use Policy. Available online: <https://policy.greenparty.org.uk/du.html>
31. Nelson, L. Politico, 25 October 2017 'Poll: Growing number of Americans support marijuana legalization, including Republicans' Available online: <https://www.politico.com/story/2017/10/25/poll-americans-support-marijuana-legalization-244155>
32. Professor Barnes, M. and Dr. Barnes, J. (2016) 'Cannabis: The Evidence for Medical Use' Available online: https://drive.google.com/file/d/0B0c_8hkDju0DUDZMUzhoYIRqMG8/view
33. MS Society (undated) Cannabis and MS: The role of cannabis in treating MS symptoms. Available online: <https://www.mssociety.org.uk/sites/default/files/Cannabis%20and%20MS%20Report%20July%202017.pdf>
34. See the studies cited at Epilepsy Research UK: <https://www.epilepsyresearch.org.uk/?s=cannabis&x=0&y=0>
35. MS Society (undated) Cannabis and MS: The role of cannabis in treating MS symptoms, p.3. Available online: <https://www.mssociety.org.uk/sites/default/files/Cannabis%20and%20MS%20Report%20July%202017.pdf>
36. Ibid.
37. BBC News (17 January 2018) 'AMs back calls for legal medicinal cannabis for patients' Available online: <http://www.bbc.co.uk/news/uk-wales-politics-42709244>
38. Donnelly, L. (10 July 2016) *The Telegraph* 'Most MPs back legalisation of medical marijuana, poll finds' Available online: <https://www.telegraph.co.uk/news/2016/07/10/most-mps-back-legalisation-of-medical-marijuana-poll-finds/>
39. MS Society (undated) Cannabis and MS: The role of cannabis in treating MS symptoms. Available online: <https://www.mssociety.org.uk/sites/default/files/Cannabis%20and%20MS%20Report%20July%202017.pdf>
40. See the APPG website for reports on cannabis-based medicines: <http://www.drugpolicyreform.net/p/med.html>
41. Health Poverty Action (undated) The Determinants of Health. Available online: <https://www.healthpovertyaction.org/info-and-resources/the-determinants-of-health/>
42. Royal College of Psychiatrists, (undated) 'Cannabis and mental health' Available online: <http://www.rcpsych.ac.uk/healthadvice/problemsanddisorders/cannabis.aspx>
43. NHS Digital and National Statistics (2015) 'Smoking, Drinking and Drug Use Among Young People in England – 2014.' See Table 8.7c in 'Smoking, Drinking and Drug Use Among Young People in England - 2014: Chapter 8 - Drug Use Tables' Available online: <http://digital.nhs.uk/catalogue/PUB17879>. It should also be noted that the European Drug Report (2017) suggests that 19% of English and Welsh school children aged 15-16 have tried cannabis in their lifetime. See <http://www.emcdda.europa.eu/system/files/publications/4541/TDATI7001ENN.pdf> (p.87).
44. 2016 Washington State Healthy Youth Survey, Available online: <https://www.doh.wa.gov/Portals/1/Documents/8350/160-NonDOH-DB-MJ.pdf>
45. Scientific American (undated) 'Colorado's Teen Marijuana Usage Dips after Legalization' <https://www.scientificamerican.com/article/colorado-s-teen-marijuana-usage-dips-after-legalization/>
46. Ingraham, C. The Washington Post, December 11, 2017. 'Following marijuana legalization, teen drug use is down in Colorado.' Available online: <https://www.washingtonpost.com/news/wonk/wp/2017/12/11/following-marijuana-legalization-teen-drug-use-is-down-in-colorado>
47. BBC News (18 August 2010) 'Under-18 ban 'cut teenage smoking rates' Available online: <http://www.bbc.co.uk/news/health-11001599>
48. NHS Digital (2017) Statistics on drugs misuse England, 2017 <http://www.content.digital.nhs.uk/catalogue/PUB23442/drug-misu-eng-2017-rep.pdf>
49. Di Forti, M. (February 27 2018) *Volteface* 'Nearly All cannabis Seized By UK Police Is High-Strength 'Skunk' – Here's Why We Should Be Worried' Available online: <http://volteface.me/nearly-cannabis-seized-uk-police-high-strength-skunk-heres-worried/>
50. D Forti, M. et al. (2015) 'Proportion of patients in south London with first-episode psychosis attributable to use of high potency cannabis: a case-control study' *Lancet Psychiatry* 2015 Available online: http://www.thelancet.com/pb/assets/raw/Lancet/pdfs/14TLP0454_Di%20Forti.pdf
51. Di Forti M, Morgan C, Dazzan P, et al. (2009) 'High-potency cannabis and the risk of psychosis.' *The British Journal of Psychiatry*. 2009;195(6):488-491. doi:10.1192/bjp.bp.109.064220.
52. Dr. Englund, A. et al. (2017) 'Can we make cannabis safer?' *The Lancet Psychiatry*, Volume 4, No. 8, p643–648. Available online: [http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366\(17\)30075-5.pdf](http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366(17)30075-5.pdf)
53. Clegg, N. June 2017, 'Why the Liberal Democrats believe a legal, regulated cannabis market would improve public health' Available online: <http://blogs.bmj.com/bmj/2017/06/01/nick-clegg-why-the-liberal-democrats-believe-a-legal-regulated-cannabis-market-would-improve-public-health/>
54. Gayle, D. (27 Feb 2018) *The Guardian*, 'High-strength cannabis now dominates illegal market, study finds' Available online: <https://www.theguardian.com/society/2018/feb/27/high-strength-cannabis-now-dominates-illegal-market-study-finds>
55. McPartland, J.M. and McKernan, K.J. (2017) 'Contaminants of Concern in Cannabis: Microbes, Heavy Metals and Pesticides' In: Chandra S., Lata H., El Sohly M. (eds) *Cannabis sativa L. - Botany and Biotechnology*. Springer, Cham
56. Transform, (2016) *How to Regulate Cannabis A Practical Guide: 2nd Edition* Available online <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabis-practical-guide> p. 252.
57. Caulkins, J.P. et al. (2016) *Marijuana Legalization: What Everyone Needs to Know*, 2nd Edition. (OUP: New York) p.49.
58. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi.p.7. Available online: <https://www.iser.essex.ac.uk/d/153>. p. v.
59. Caulkins, J.P. et al. (2016) *Marijuana Legalization: What Everyone Needs to Know*, 2nd Edition. (OUP: New York) p.49.
60. Lopez, G. Vox (29 April 2016), 'Is marijuana a gateway drug? Here's what the research says.' Available online: <https://www.vox.com/2016/4/29/11528410/cannabis-gateway-drug-theory>
61. Caulkins, J.P. et al. (2016) *Marijuana Legalization: What Everyone Needs to Know*, 2nd Edition. (OUP: New York) p.49-50.
62. As, until 2013, no countries had legalised cannabis any predictions about whether legalising cannabis leads to increased or decreased alcohol consumption is inevitably a prediction. However, that aside, the studies that explore this have often reached "...opposing conclusions, and

- some studies reach opposing conclusions for different population groups.” (See Caulkins, J.P. et al. (2016) *Marijuana Legalization: What Everyone Needs to Know*, 2nd Edition. (OUP: New York), p. 126–7.
63. Baggio, M., Chong, A. and Kwon, S. (2017) ‘Helping Settle the Marijuana and Alcohol Debate: Evidence from Scanner Data’, Available at <http://dx.doi.org/10.2139/ssrn.3063288>
 64. Kilmer, B. and Smart, R. (Feb 13 2018) *Rand Corporation* ‘How Will Cannabis Legalization Affect Alcohol Consumption?’ Available online: <https://www.rand.org/blog/2018/02/how-will-cannabis-legalization-affect-alcohol-consumption.html>
 65. Kilmer, B. and Smart, R. (Feb 13 2018) *Rand Corporation* ‘How Will Cannabis Legalization Affect Alcohol Consumption?’ Available online: <https://www.rand.org/blog/2018/02/how-will-cannabis-legalization-affect-alcohol-consumption.html>
 66. Ingraham, C. The Washington Post, (December 11, 2017). ‘Following marijuana legalization, teen drug use is down in Colorado.’ Available online: <https://www.washingtonpost.com/news/wonk/wp/2017/12/11/following-marijuana-legalization-teen-drug-use-is-down-in-colorado>
 67. Nutt, D, King, L. A., Phillips, L. D., on behalf of the Independent Scientific Committee on Drugs, (2010) ‘Drug harms in the UK: a multicriteria decision analysis’ *The Lancet*, 376: 1558–65. 2010. Published Online November 1, 2010. Available at: [http://dx.doi.org/10.1016/S0140-6736\(10\)61462-6](http://dx.doi.org/10.1016/S0140-6736(10)61462-6)
 68. See Caulkins et al (2016) *Marijuana Legalization: What Everyone Needs to Know*, 2nd Edition. (OUP: New York), p. 127
 69. Professor Barnes, M. and Dr. Barnes, J. (2016) ‘Cannabis: The Evidence for Medical Use’ Available online: https://drive.google.com/file/d/0B0c_8hkDju0DUDZMUzhoYIRqMG8/view
 70. Bradford, A. C. and Bradford W. D. (2017) ‘Medical Marijuana Laws May Be Associated With A Decline In The Number Of Prescriptions For Medicaid Enrollees’ *Health Affairs* 36 (5) Available online: <https://www.ncbi.nlm.nih.gov/pubmed/28424215>
 71. Borchardt, D., *Forbes*, (21 April 2017) ‘Medicaid Could Have Saved \$1 Billion If Medical Marijuana Was Legalized’ Available online: <https://www.forbes.com/sites/debraborchardt/2017/04/21/medicaid-could-have-saved-1-billion-if-medical-marijuana-was-legalized>
 72. Townsend, M. (5 March 2017) *The Guardian* ‘Drugs seized 30 times a day in prisons, according to new data’ Available online: <https://www.theguardian.com/society/2017/mar/05/drugs-epidemic-prisons-violence>
 73. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi. Available online: <https://www.iser.essex.ac.uk/d/153>, p.92. One study cited found that 56% of employers said that a drug offence would ‘count a lot against’ job applicants.
 74. House of Commons Library, (17 October 2017) Briefing Paper Number 2989, ‘Housing support for ex-offenders (England and Wales)’ p.4. Available online: <https://research.briefings.parliament.uk/ResearchBriefing/Summary/SN02989>
 75. Prison Reform Trust and UNLOCK (2010) ‘Time is Money’ Available online: <http://www.prisonreformtrust.org.uk/ProjectsResearch/Resettlement/TimeisMoney>
 76. Release, *The numbers in black and white: ethnic disparities in the policing and prosecution of drug offences in England and Wales*. Release: London, 2013. Available online: <https://www.release.org.uk/publications/numbers-black-and-white-ethnic-disparities-policing-and-prosecution-drug-offences>
 77. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi. Available online: <https://www.iser.essex.ac.uk/d/153>. p.vi.
 78. <https://www.theguardian.com/society/2017/mar/25/trafficked-enclaved-teenagers-tending-uk-cannabis-farms-vietnamese>
 79. Cook, R. (25 October 2016) *Asia Times* ‘Weed out the child traffickers’ Available online: <http://www.atimes.com/article/young-vietnamese-are-victims-in-uks-blood-cannabis-shame/>
 80. Transform (18 Oct 2016) ‘Modern Slavery - a cost of the war on drugs’ <http://www.tdpf.org.uk/blog/modern-slavery-cost-war-drugs>
 81. The Home Office, Drug Misuse: Findings from the 2016/17 Crime Survey for England and Wales, (July 2017). Available online: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/642738/drug-misuse-2017-hosb1117.pdf See Figure 5.2, p.31.
 82. Ingraham, C. The Washington Post, December 11, 2017. ‘Following marijuana legalization, teen drug use is down in Colorado.’ Available at: <https://www.washingtonpost.com/news/wonk/wp/2017/12/11/following-marijuana-legalization-teen-drug-use-is-down-in-colorado>
 83. Kerr, W. C., Lui, C., and Ye, Y. (2018) Trends and age, period and cohort effects for marijuana use prevalence in the 1984–2015 US National Alcohol Surveys. *Addiction*, 113: 473–481. doi: 10.1111/add.14031.
 84. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi. Available online: <https://www.iser.essex.ac.uk/d/153>.
 85. Ibid. p.112. Others have suggested that the tax income could be nearer £1 billion, although this also includes other forms of taxes too such as license fees for producers and income tax from wages of people working in a new cannabis industry. (See Channel 4, Fact Check (18 March 2016) ‘Cannabis taxes – money spinner or smoke and mirrors?’ Available online: <https://www.channel4.com/news/factcheck/factcheck-cannabis-taxes-money-spinner-smoke-mirrors>)
 86. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi. Available online: <https://www.iser.essex.ac.uk/d/153>. p.112.
 87. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi. Available online: <https://www.iser.essex.ac.uk/d/153>. p.61
 88. Transform, (2016) *How to Regulate Cannabis A Practical Guide: 2nd Edition* Available online <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabis-practical-guide> p. 255.
 89. Ibid.
 90. The Liberal Democrats (2016) ‘A framework for a regulated market for cannabis in the UK: Recommendations from an expert panel’ Available online: https://www.libdems.org.uk/a_regulated_cannabis_market_for_the_uk p.17.
 91. Looking at the official data from Colorado we can also see that in the last six months for which there are data

(August 2017 – January 2018), they have raised \$134m, or a projected \$268m over a year. Scaled up to the UK population this would be \$3.176 billion (£2.26 billion) assuming similar levels of consumption and costs of cannabis. Tax income data for Colorado can be seen here: www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data

92. Washington state tax income from excise duties on cannabis was \$315m in 2016-17. If we again look at the last 6 months for which there are data (May – October 2017) then we see a tax income in Washington of \$177 million. Scaled up to the UK that would be \$3.19 billion (£2.26 billion) over a year, assuming similar levels of consumption and costs of cannabis. Even adjusting for issues such as cannabis tourism which happens in the US (as in neighboring states it is not legal) and higher consumption rates, the figures still suggest a significant tax income is possible from a regulated cannabis market in the UK. Washington state tax data can be accessed here: <https://data.lcb.wa.gov/stories/s/WSLCB-Marijuana-Dashboard/hbnp-ia6v/>
93. The tax income in the Netherlands from 'coffee shops' is estimated to be about 400m. Scaled up to the UK population, this would mean a tax income of £1.4 billion. See: Transform (2014) Cannabis policy in the Netherlands: moving forwards not backwards. Available online: <http://www.tdpf.org.uk/blog/cannabis-policy-netherlands-moving-forwards-not-backwards>
94. Starling, B. (2016) *The Adam Smith Institute and Volteface*, 'The Tide Effect: How the world is changing its mind on cannabis legalization' Available online: <https://static1.squarespace.com/static/56eddde762cd9413e151ac92/t/582eccc6e3df2844237ca6dc/1479470281332/The+Tide+Effect+WEB+VERSION.pdf>
95. Alcohol duties (approximately £10.68bn/year) make up approximately 26.8% of total alcohol sales (approximately £39.9 billion according to the Wines and Spirit Trades Association). If this was the case for a £7 billion cannabis market, equivalent duties could be expected to be £1.87 billion. This does not include other sources of tax income paid by or as a result of the alcohol industry such as VAT paid by consumers, corporation taxes or employee-related taxes paid by alcohol corporations or income/NI taxes paid by employees. If this was taken into account it could be considerably higher. The Wines and Spirits Association suggest that the wine and spirit industries alone contribute a total of £16.4bn in all taxes as a result of sales totalling £21.1bn. See: WSTA Market Overview, 2016 Available online: <http://www.wsta.co.uk/publications-useful-documents/117-wsta-market-overview-2016/file> For information on the size of alcohol duties see <https://www.uktradeinfo.com/Statistics/Pages/TaxAndDutybulletins.aspx>
96. Tobacco duties paid to the government total roughly £9.5bn each year. See: <https://www.uktradeinfo.com/Statistics/Pages/TaxAndDutybulletins.aspx> This is 50% of total consumer spending on tobacco products, according to the 2016 Office for National Statistics data on consumer spending (See: <https://www.ons.gov.uk/economy/nationalaccounts/satelliteaccounts/datasets/consumertrendscurrentpricesseasonallyadjusted/current/>). An equivalent level of excise duties on the total £7bn spent on cannabis would yield £3.5 billion. In addition to this, there is c.£2.6 billion in VAT paid to the Treasury out of the total spent by tobacco consumers. The comparison is illustrative of the point that the tobacco industry – the most similar to a cannabis market in many respects in terms of the need for regulation - is heavily taxed and does contribute significantly to tax income. The estimate here is if anything conservative – the total taxes paid for the average pack of cigarettes is in fact over 82%. See also the Tobacco Manufacturers Association for more information: <http://the-tma.org.uk/policy-legislation/taxation/> and <http://the-tma.org.uk/tma-publications-research/facts-figures/uk-tobacco-market-summary/>
97. Transform, (2015) *Cannabis regulation in Colorado: early evidence defies the critics*, Available online: <http://www.tdpf.org.uk/blog/cannabis-regulation-colorado-early-evidence-defies-critics>
98. Campbell D. (8 Nov 2017) *The Guardian* 'NHS needs £24bn more by 2022 or waiting lists will grow and care be hit' Available online: <https://www.theguardian.com/society/2017/nov/08/nhs-needs-24bn-more-by-2022-or-waiting-lists-will-grow-and-care-be-hit>
99. Nuffield Trust, Kings Fund and the Health Foundation (2017) 'The Autumn Budget Joint statement on health and social care' Available online: https://www.nuffieldtrust.org.uk/files/2017-11/1510074386_autumn-budget-2017-briefing.pdf
100. Nuffield Trust (2017) 'Autumn Budget 2017: What it means for health and social care' Available online: <https://www.nuffieldtrust.org.uk/resource/autumn-budget-2017-what-it-means-for-health-and-social-care#what-was-announced>
101. Numbers of FTE NHS midwives and ambulance staff taken from October 2017 'NHS Hospital & Community Health Service (HCHS) monthly workforce statistics - Provisional Statistics - staff in Trusts and CCGs' available online: <https://digital.nhs.uk/catalogue/PUB30189> The cost of the annual basic salaries per FTE employee in each category is taken from 'NHS Staff Earnings estimates to September 2017' available online: <https://digital.nhs.uk/catalogue/PUB30174>
102. Elgot, J. (17 May 2017) *The Guardian*, 'Liberal Democrats: we would raise £1bn in tax by legalising cannabis' Available online: <https://www.theguardian.com/politics/2017/may/17/liberal-democrats-1bn-tax-legalising-cannabis>
103. Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, p. iv <https://www.iser.essex.ac.uk/d/153>.
104. Ibid.
105. Ibid.
106. The saving of £16m was on the assumption of a smaller increase in the numbers of people using cannabis, and a reduction on the average THC content. The higher estimate was based on there being a big increase in use and strength of cannabis used.
107. Drugwise, 'Where do drugs come from?' Available online: <http://www.drugwise.org.uk/where-do-drugs-come-from/>
108. Blickman, T. (2017) *The Transnational Institute*, Drug Policy Briefing 49, 'Morocco and Cannabis: Reduction, containment or acceptance', p.18. Available online: <https://www.tni.org/en/publication/morocco-and-cannabis>
109. Ibid.
110. Tharoor, A. (7 February 2018) *Talking Drugs* 'US Corp Cashes in as Lesotho Becomes the First African Country to Legalise Cannabis Cultivation' Available online: <https://www.talkingdrugs.org/lesotho-cannabis-legalisation-restricted>
111. Ibid. p.19.
112. Ibid.

- 113.** Transform (2016) 'Turkey's opium trade: successfully transitioning from illicit production to a legally regulated market' Available online: <http://www.tdpf.org.uk/blog/turkey%E2%80%99s-opium-trade-successfully-transitioning-illicit-production-legally-regulated-market>
- 114.** Transform, (2016) *How to Regulate Cannabis A Practical Guide: 2nd Edition* Transform: Bristol Available online at: <http://www.tdpf.org.uk/resources/publications/how-regulate-cannabis-practical-guide>
- 115.** Caulkins, J.P. et al. (2016) *Marijuana Legalization: What Everyone Needs to Know, 2nd Edition.* (OUP: New York)
- 116.** The Health Officers Council of British Columbia (2017) 'Cannabis Policy and Regulation to Protect and Promote Health and Safety' Available online: <https://healthofficerscouncil.files.wordpress.com/2017/11/hoc-cannabis-regulation-perspectives-oct-31-2017.pdf>
- 117.** Healthy Canada (2016) A Framework for the Legalization and Regulation of Cannabis in Canada Available online: <http://healthycanadians.gc.ca/task-force-marijuana-groupe-etude/framework-cadre/alt/framework-cadre-eng.pdf>
- 118.** Colorado Department of Revenue, Marijuana Enforcement Division, Retail Marijuana Rules Available online: <https://www.colorado.gov/pacific/sites/default/files/Amalgamated%20Retail%20Marijuana%20Rules%2001012018.pdf> p. 52
- 119.** The Economist, (3 Jan 2018) 'The Golden State's new pot laws are almost comically progressive' Available online: <https://www.economist.com/news/united-states/21733424-some-cities-plan-give-people-marijuana-convictions-priority-when-setting-up-legal>
- 120.** Kelley, J. (3 Feb 2018) *Inside Sources* 'Welcome Ex-Offenders Into Legal Marijuana Jobs' Available online: <http://www.insidesources.com/welcome-ex-offenders-legal-marijuana-jobs/>
- 121.** Health Poverty Action (2015) Drug Policy and the Sustainable Development Goals. Available online: <https://www.healthpovertyaction.org/wp-content/uploads/2015/11/HPA-SDGs-drugs-policy-briefing-WEB.pdf>
- 122.** See above. If the UK market was similar to those in Colorado or Washington in the US, then we could expect tax returns of approximately £2.25 billion. If the UK market worked like the Netherlands, it would be worth £1.4 billion in tax revenue. The oft-cited figure in the UK is £1 billion. See for example: <https://www.theguardian.com/politics/2017/may/17/liberal-democrats-1bn-tax-legalising-cannabis>
- 123.** Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, vi.p.7. Available online: <https://www.iser.essex.ac.uk/d/153>.
- 124.** Professor Barnes, M. and Dr. Barnes, J. (2016) 'Cannabis: The Evidence for Medical Use' Available online: https://drive.google.com/file/d/0B0c_8hkDJu0DUDZMUzhoY1RqMG8/view
- 125.** Evidence from the US suggests that where medical cannabis is legal there are savings on drugs for Medicaid. See: Bradford, A. C. and Bradford W. D. 'Medical Marijuana Laws May Be Associated With A Decline In The Number Of Prescriptions For Medicaid Enrollees' *Health Affairs* 36 (5) Available online: <https://doi.org/10.1377/hlthaff.2016.1135>
- 126.** Transform, *Cannabis regulation in Colorado: early evidence defies the critics*, 2015. Available online: <http://www.tdpf.org.uk/blog/cannabis-regulation-colorado-early-evidence-defies-critics> See also: Ingraham, C. The Washington Post, December 11, 2017. 'Following marijuana legalization, teen drug use is down in Colorado.' Available at: <https://www.washingtonpost.com/news/wonk/wp/2017/12/11/following-marijuana-legalization-teen-drug-use-is-down-in-colorado>
- 127.** *Royal College of Psychiatrists*, (undated) 'Cannabis and mental health' Available online: <http://www.rcpsych.ac.uk/healthadvice/problemsanddisorders/cannabis.aspx>.
- 128.** Kilmer, B. and Smart, R. (Feb 13 2018) *Rand Corporation* 'How Will Cannabis Legalization Affect Alcohol Consumption?' Available online: <https://www.rand.org/blog/2018/02/how-will-cannabis-legalization-affect-alcohol-consumption.html>
- 129.** Ingraham, C. The Washington Post, December 11, 2017. 'Following marijuana legalization, teen drug use is down in Colorado.' Available at: <https://www.washingtonpost.com/news/wonk/wp/2017/12/11/following-marijuana-legalization-teen-drug-use-is-down-in-colorado>
- 130.** Nutt, D, King, L. A., Phillips, L. D., on behalf of the Independent Scientific Committee on Drugs, (2010) 'Drug harms in the UK: a multicriteria decision analysis' *The Lancet*, 376: 1558–65. 2010. Available online: [http://dx.doi.org/10.1016/S0140-6736\(10\)61462-6](http://dx.doi.org/10.1016/S0140-6736(10)61462-6)
- 131.** Dr. Englund, A. et al. (2017) 'Can we make cannabis safer?' *The Lancet Psychiatry*, Volume 4, No. 8, p643–648. Available online: [http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366\(17\)30075-5.pdf](http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366(17)30075-5.pdf)
- 132.** Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, p. v. Available online: <https://www.iser.essex.ac.uk/d/153>.
- 133.** Lopez, G. Vox (29 April 2016), 'Is marijuana a gateway drug? Here's what the research says.' Available online: <https://www.vox.com/2016/4/29/11528410/cannabis-gateway-drug-theory>
- 134.** Release, *The numbers in black and white: ethnic disparities in the policing and prosecution of drug offences in England and Wales.* Release: London, 2013.
- 135.** Pudney, S. et al. (2013) Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, p.91-92. Available online: <https://www.iser.essex.ac.uk/d/153>
- 136.** Pudney, S. et al. (2013), Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis, Institute for Social and Economic Research, p. iv. Available online: <https://www.iser.essex.ac.uk/d/153>



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