

TRANSFORM
Drug Policy Foundation

**HIGH RETURNS:
THE ECONOMIC
BENEFITS OF
UK CANNABIS
LEGALISATION**



ABOUT US

WHO WE ARE

TRANSFORM DRUG POLICY FOUNDATION IS AN INDEPENDENT, UK-BASED CHARITY WORKING NATIONALLY AND INTERNATIONALLY TOWARDS A JUST AND EFFECTIVE SYSTEM OF LEGAL REGULATION FOR ALL DRUGS

Our vision is a world where drug policy **contributes to safer and healthier societies.**

At Transform, we educate the public and policymakers on effective drug policy; we develop and promote viable options for legal regulation; and we support governments, policymakers and practitioners in achieving positive change that contributes to safer and healthier societies.

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In addition to our long-term goal, we work actively to support pragmatic changes to how we approach drugs and drug use that can save lives today.

Through our Anyone's Child campaign, we provide opportunities for people with personal experiences of drug policy failures to be heard.



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CONTENTS

EXECUTIVE SUMMARY	3
Summary of total revenue, savings and costs expected for three different cannabis regulation models	6
INTRODUCTION	
■ UK cannabis policy in a rapidly changing global landscape	7
■ Economic arguments for reform	8
■ Notes on methodology	9
■ Three possible UK cannabis scenarios	12
■ An outline of Transform's cannabis regulation proposals	13
CONSUMPTION AND DEMAND IN THE UK MARKET	
■ Prevalence of cannabis use	14
■ Consumption frequency	15
■ Consumption volumes	16
TAX REVENUE	
■ How will legal cannabis displace the illegal market?	18
■ Taxing the legal cannabis market	20
■ Cannabis excise tax options	21
■ Corporation tax	23
■ Income tax	23
COSTS OF REGULATORY FRAMEWORK	25
COSTS AND SAVINGS ACROSS THE CRIMINAL JUSTICE SYSTEM	
■ Policing	27
■ Stop and search	28
■ Court proceedings	29
■ Prisons	29
■ Crown Prosecution Service	31
■ Legal Aid	31
COSTS OF LIFE SCARRING	
■ Opportunity for economic and social justice	32
■ Social equity programmes	33

DISCUSSION ON COSTS AND SAVINGS IN THE HEALTH SYSTEM

- Prevalence of use 35
- Health harms per consumer 38
- Treatment costs 39
- Health costs related to driving under the influence 40
- Health benefits 41

CONCLUSION

42

EXECUTIVE SUMMARY

This report evaluates the economic impacts of legalising and regulating cannabis for adult non-medical use in the UK from a Treasury perspective of income and spending. The report focuses on government revenues (corporation and income tax, VAT, National Insurance, licensing fees and, in the scenario of a state monopoly model, profits), savings across the Criminal Justice System (CJS) from reduced costs on enforcement, and the costs of administering a regulatory model.

For Transform, economic arguments for cannabis, though significant, are secondary to public health and social justice policy priorities. But the economic dimensions of the cannabis reform debate are undoubtedly gaining political salience, particularly as governments face growing budgetary pressures. Public support for cannabis reform, particularly for economic reasons, such as disrupting illegal profits, and the potential tax windfall, is growing in both the U.S. and the UK. Legal cannabis markets are expanding globally – with reforms now unfolding on every continent. This global momentum, coupled with growing public support in the UK – polls show a majority favours legalisation – suggests reform is increasingly likely, if not inevitable, with economic arguments potentially decisive.

POTENTIAL NET ECONOMIC BENEFITS OF UP TO £1.5 BILLION

- **Tax revenue and Criminal Justice System savings:** Legal regulation could generate significant annual net benefits to the Treasury of up to **£1.5 billion**.
- **Job creation:** Up to **15,500 full-time equivalent jobs** could be created across cultivation, manufacture, retail and ancillary services depending on the regulatory model.
- **Market capture:** A mature regulated market could capture **up to 80% of the current illegal cannabis market** within five years, based on international precedents in regulating jurisdictions such as Canada.

CRIMINAL JUSTICE SAVINGS OF UP TO £284 MILLION

- **Reducing policing costs:** Legal regulation could **save up to £88 million annually** by reducing arrests and stop-and-searches for cannabis-related offences.
- **Crown Prosecution Service, courts and prisons savings: £187 million** via a decrease in cannabis-related prosecutions.

WIDER BENEFITS

- Removing criminal penalties for cannabis offences and deleting criminal records for past cannabis offences can **alleviate the long-term economic harms of criminal records, improving life opportunities** and economic prospects for those impacted.
- Opportunities for **repairing historic harms of punitive cannabis enforcement**, disproportionately carried by socially and economically marginalised communities, in particular the Black community. This can be achieved through proactively facilitating participation of impacted communities in emerging markets, and targeted reinvestment of cannabis revenues.
- Opportunity for **safer, responsibly labelled, quality/dosage controlled products**, and redirection of **resources into targeted risk education and proven health interventions** (prevention, harm reduction and treatment).

This report models three different post-prohibition market scenarios and outlines the different outcomes in terms of spending and revenue. It uses real-world data from emerging legal cannabis markets to inform updated estimates and assumptions.

Key assumptions in Transform's analysis:

- There is a five year time horizon post reform to allow a more comprehensive market roll out.
- It is a UK domestic only, legal market (no international trade).
- All three scenarios are responsibly regulated in line with Transform's best practice regulation guide.

MODEL 1

HOME-GROW PROVISION FOR PERSONAL USE, AND NON-PROFIT MEMBERSHIP-BASED ASSOCIATIONS, WITH NO COMMERCIAL RETAIL

Adults can grow cannabis for personal use and have access via regulated non-profit membership-based associations (as established in Spain, Uruguay, Germany and Malta).

- Tax revenue: £345 million.
- 7,000 new jobs.
- Criminal Justice Savings: £174 million.
- Legal market capture: 45% of the total market by year five.
- Advantages: Lower regulatory cost and avoids profit driven incentives of a commercial retail market.
- Disadvantages: Less able to displace the illegal market than with commercial retail options.

MODEL 2

HYBRID MODEL INCLUDING HOME GROW, NON-PROFIT ASSOCIATIONS, AND REGULATED COMMERCIAL RETAIL

Allows for non-profit community-based production/supply as well as commercial cannabis distribution under a strict regulatory framework.

- Tax revenue: £1.1 billion and
- 15,525 new jobs.
- Criminal Justice Savings: £284 million.
- Legal market capture: 80% of the total market by year five.
- Advantages: Balances revenue generation with public health safeguards, offers a greater opportunity to redress the harms of prohibition through social equity programmes.
- Disadvantages: Higher risk of market consolidation, emergence of monopolies, and corporate capture distorting policy priorities – compromising wider social policy and public health goals

MODEL 3

HOME GROW, NON-PROFIT ASSOCIATIONS, AND COMMERCIAL RETAIL OPERATING UNDER A STATE MONOPOLY

A hybrid model similar to model 2, but with commercial cannabis retail operating under a state monopoly, as in some Canadian and US jurisdictions.

- Tax Revenue (plus retail profits): £1.23 billion
- 15,000 new jobs
- Criminal Justice Savings: £282 million
- Legal market capture: 80% of the total market by year five.
- Advantages: Maximises government revenue, prioritises public health and avoids market consolidation and corporate capture.
- Disadvantages: Limits market competition and innovation.

	MODEL 1: HOME-GROW AND NON-PROFIT ASSOCIATIONS	MODEL 2: HYBRID (HOME-GROW, NON-PROFIT ASSOCIATIONS AND COMMERCIAL RETAIL)	MODEL 3: HYBRID WITH STATE MONOPOLY ON RETAIL
GOVERNMENT REVENUE (£M)			
Cannabis Excise Tax	87	462	462
VAT	175	376	376
Corporation tax	n/a	68	34
Income tax and National Insurance contributions	83	184	178
Profit from sales	n/a	n/a	180
TOTAL REVENUE:	345	1,090	1,230
CRIMINAL JUSTICE SAVINGS (£M)			
Policing	50	88	88
Stop and search	9	9	9
Court proceedings	59	106	106
Crown Prosecution Service	9	16	16
Prisons	36	45	45
Legal aid	11	20	20
TOTAL SAVINGS:	174	284	284
COSTS OF REGULATORY FRAMEWORK (£M)			
Regulatory fees (income)	24	160	80
Regulatory costs	30	200	100
TOTAL NET COSTS	6	40	20
TOTAL TREASURY NET BENEFIT (£M)	513	1,334	1,494

Table 1: Summary of total revenue, savings and costs expected for three different cannabis regulation models (to the nearest £million)

INTRODUCTION

UK CANNABIS POLICY IN A RAPIDLY CHANGING GLOBAL LANDSCAPE

Cannabis reforms are accelerating across the globe. Cannabis has famously enjoyed quasi-legal status in Dutch ‘coffee shops’ since the 1970s, yet the current wave of cannabis reforms began relatively recently. The first retail outlets for non-medical cannabis for adult use opened in Colorado and Washington only 10 years ago – today there are 24 US states with regulated non-medical cannabis markets.¹ Uruguay became the first country to legalise and regulate cannabis in 2013. In 2018 Canada became the first G7 country to follow suit – President Trudeau’s landslide victory was on the back of a manifesto commitment to legalise.

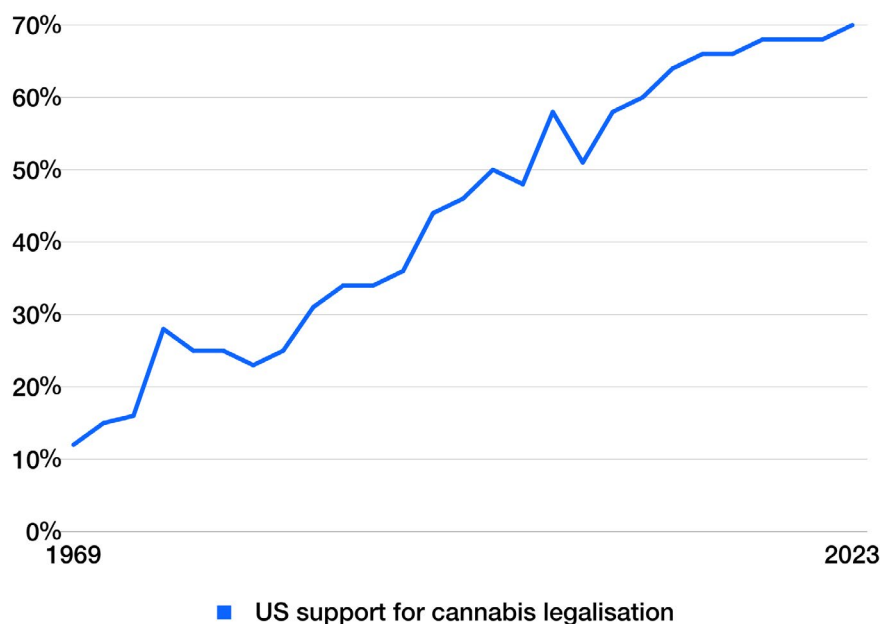
Since then, reforms have proceeded apace on every continent, albeit in different forms. Mexico and South Africa have seen strategic litigation in their constitutional courts effectively strike down cannabis prohibition – preparing the ground for regulated availability. Thailand’s reforms, while somewhat unplanned and chaotic, have nonetheless

opened a wider debate in Southeast Asia. Most recently, a wave of reforms has swept across the European Union – Malta, Luxembourg, Czechia, Switzerland, the Netherlands and Germany are all making moves towards legally regulated cannabis. Today more than 500 million people live in jurisdictions with, or in the process of implementing, some form of legal adult access to cannabis for non-medical use. In fact, it is now possible to walk from the Arctic Circle in Canada, down the West Coast of the US to the tropics of Southern Mexico, without leaving a legal cannabis jurisdiction.

IT IS NOW POSSIBLE TO WALK FROM THE ARCTIC CIRCLE IN CANADA, DOWN THE WEST COAST OF THE US TO THE TROPICS OF SOUTHERN MEXICO, WITHOUT LEAVING A LEGAL CANNABIS JURISDICTION

As this global change gathers momentum, it seems inevitable that in the near future cannabis reform will become a reality in the UK. British public opinion has been steadily moving towards increased support for legalisation. Recent polling suggests a majority of 51% support or strongly support legalisation and a further 15% are undecided.¹ This steadily growing support has occurred without the backing from either Labour or Conservative parties (in

¹ When we refer to legal non-medical cannabis markets, it should be assumed we mean a market that is age restricted meaning adult only access.



Graph 1: US polling: ‘Do you think the use of marijuana should be legal or not?’, Respondents who selected ‘Yes’, 1979-2023 (Pew Research Center, 2024)¹⁷

government or opposition) or proactively supportive editorial positions from major media outlets. As the financial and human costs of prohibition's long-term failure are better understood by the public and real-world examples, particularly from Europe and North America, demonstrate the viability and benefits of legal regulation, support for change will only continue to build. The US experience also suggests that reaching majority support for legalisation was a tipping point in the reform process, with a pro-reform platform moving from political liability to political asset with key voting blocs on the right and left. Crucially, support has continued to grow in legalised jurisdictions – the public like what they see.

These dynamics are starting to break through in the UK. Both the Liberal Democrats and Greens have both long campaigned successfully on cannabis reform platforms including in the most recent election. In London, where support for legalisation is higher than at national level (one 2019 Evening Standard poll putting it at 63%), the Mayor has openly courted the pro-reform vote by launching a reform-oriented London Drugs Commission with a focus on cannabis policy.² A number of high profile reform advocates now occupy senior positions in Government, perhaps, most notably Foreign Secretary David Lammy, who penned a call for legalisation in *The Guardian* in 2019.³ Transform hopes this report can both help accelerate the arrival of that moment, and inform what follows.

ECONOMIC ARGUMENTS FOR REFORM

Given that all proceeds from the UK's recreational cannabis trade (the estimated value is £2 billion annually) currently accrue to unregulated producers, suppliers and organised crime groups, legal regulation offers an opportunity to boost legal economic activity and employment and for governments to collect what is currently foregone tax revenue.⁴ A move away from costly and ineffective punitive enforcement also holds the promise of extensive savings across the Criminal Justice System (CJS) and opportunities for reinvestment into the racially and economically marginalised communities, in particular the Black community, that have been most harmed by the 'War on Drugs'. Although this report does not address in detail the mechanisms by which cannabis legalisation can achieve these goals, we are committed to collaborating with these communities to ensure that they are leading the design and evaluation of relevant legislation and are at the forefront of the benefits that drug law reforms can deliver.

Economic arguments for reform have demonstrated high political salience with policy makers and public alike. Taxpayers want to see positive outcomes from public spending and are increasingly aware that punitive enforcement directed against people who use and supply cannabis is money wasted because it is ineffective and counterproductive. For a government seemingly unbothered by the historic failures of punitive prohibition, but now facing extreme budgetary pressures, the benefits of annual cannabis tax income and savings across the overburdened CJS may prove highly persuasive.

US polling suggests that, among the various arguments, the economic case for reform achieves the widest public support.⁵ Similarly, polling in the UK has found that economic arguments – both denying illegal profits to organised crime groups, and the promise of a tax windfall – hold the greatest sway.⁶

The economic argument is only one element of a wider case for reform that includes promoting equity and social justice, protecting public health, reducing cannabis-related crime, increasing youth safety, personal liberties, and environmental sustainability. While the economic case for reform is compelling, Transform does not believe it should be the primary driver for a move to a legally regulated market; prioritising economic benefits over other urgent issues risks undermining the wider benefits of cannabis regulation. Rather, economic benefits of reform should be seen as a bonus, a 'peace dividend' as the 'War on Drugs' is retired as a failed policy paradigm. The Treasury gains from cannabis reforms should be used, at least in part, as

GIVEN THAT PROCEEDS FROM THE UK'S RECREATIONAL CANNABIS TRADE CURRENTLY ACCRUE TO UNREGULATED ORGANISED CRIME GROUPS, LEGAL REGULATION OFFERS AN OPPORTUNITY TO BOOST LEGAL ECONOMIC ACTIVITY AND EMPLOYMENT, AND FOR GOVERNMENTS TO COLLECT WHAT IS CURRENTLY FOREGONE TAX REVENUE

THE ECONOMIC ARGUMENT IS ONLY ONE ELEMENT OF A WIDER CASE FOR REFORM THAT INCLUDES PROMOTING EQUITY AND SOCIAL JUSTICE, PROTECTING PUBLIC HEALTH, REDUCING CANNABIS-RELATED CRIME, INCREASING YOUTH SAFETY, PERSONAL LIBERTIES, AND ENVIRONMENTAL SUSTAINABILITY

an enabler of wider drug policy reform goals including repairing the decades-long harms of punitive cannabis enforcement (through deleting criminal records, resentencing and investment in equity, [see p. 32-34](#)), as well as funding evidence-based harm reduction, prevention, and treatment.

The economic arguments are, however, of profound political importance. As public opinion and emerging international precedent align to make cannabis reforms increasingly likely, the economic dimension may prove

decisive. Facing a choice between deeply unpopular tax rises and cuts to public spending, or increasingly popular cannabis reforms, the Government's economic calculus could soon be swinging in favour of change.

NOTES ON METHODOLOGY

The economic analysis in this report takes a Treasury perspective, i.e. the impacts on government spending and revenues of a move to a legally regulated cannabis market in the UK. This specifically includes government revenues from the new market (excise tax, VAT, corporation tax, income tax, National Insurance contributions, licensing and related fees, as well as profits in a state monopoly retail scenario); savings across the Criminal Justice System from the roll-back of policing and punitive sanctions associated with cannabis related offences; and the costs of administering a regulatory market model. Further, we discuss the potential health costs and benefits of a regulated cannabis market and highlight the necessary financial commitment to social equity programmes which bring their own social and economic advantages by promoting economic inclusion and a diverse business landscape.

There have been several works over the past decade or so which have focused more on the direct economic impacts of cannabis legalisation in the UK. The most comprehensive study in this area to date is a report undertaken by Bryan *et al.* for the Institute for Social and Economic Research (ISER) in 2013. It includes estimates of the potential revenue, and the costs and savings across the Criminal Justice System and health, as well as the econometrics of legalisation more broadly, using prevalence data to estimate consumption and demand. It assumed 70% excise tax on cannabis sales, with 70% legal market capture generating up to £1 billion in revenue and savings, of which around £750 million is tax revenue.⁷ The campaign group, CLEAR, published a report in 2011, *Taxing the UK cannabis market* which provided an estimate for potential revenue, costs and savings using cannabis seizures and arrest data to estimate demand.⁸ Its estimate of annual demand, more than three times our estimate at 1,000 metric tonnes, led to calculating potential tax revenue, assuming 100% legal market capture, at between £633 million and £2.4 billion in revenue from the Cannabis Excise Tax alone, in addition to upwards of £1.17 billion in VAT. However, when these studies were carried out, nowhere had yet legalised and regulated cannabis. In the subsequent 14 years more than 45 jurisdictions have made the move in some form.

In 2018 there was a flurry of economic analyses for the UK establishing figures either for potential tax revenue or cost-savings to criminal justice and health. An analysis provided by Health Poverty Action, provides a tax revenue estimate, referring to the US cannabis markets of Colorado and



Washington as well as Bryan *et al.*'s work to provide an estimate of tax revenue from cannabis sales at around £1 billion.⁹ However, it does not include figures for criminal justice savings and costs of a regulatory framework within this figure, acknowledging there will be some.² The TaxPayers' Alliance published a report looking at savings only to the criminal justice and health system.¹⁰ The Institute of Economic Affairs provided estimates for the size and value of a future legalised cannabis market, to provide an annual tax revenue figure.¹¹

In addition, in recent years several national scale economic analyses have been published in Europe, including Germany, Czechia, France and Switzerland, all looking at what economic benefits a prospective cannabis market will generate for their countries.¹² This reflects the current appetite in Europe to move towards regulating cannabis, with substantial reforms to establish legally regulated cannabis access already happening in Germany, Luxembourg, Switzerland and Malta.

There is now a growing body of analysis and data from emerging state practice to draw on. This report builds on Bryan *et al.*'s 2013 work although with a narrower focus on Treasury income/spending, rather than cash-equivalent net social costs. The report uses updated assumptions about the nature and function of legal cannabis markets, and additional costs/benefits not included by Bryan *et al.*, informed by real-world data from legal cannabis jurisdictions. This report also offers a UK-wide analysis, rather than restricting it to England and Wales.

This report makes the following assumptions:

- [Cannabis has been formally legalised and regulated in the UK for five years](#)

A legalised cannabis market will take time to be rolled out, mature and establish new market equilibrium and social norms. We provide an analysis of a UK cannabis market five years on from commencement of legal sales. We have used detailed data from Canada, which commenced its legal cannabis market in 2018 using a regulatory model reasonably similar to that which we assume for the UK (that includes regulated retail markets), to estimate the five-year trajectory of an emerging regulated market for the UK.

- [Cannabis is responsibly regulated in line with proposals from Transform \(see: \[Three possible UK cannabis reform scenarios\]\(#\), p. 12\)](#)

There is already a wide range of policy and practice in cannabis regulation around the world, from the state monopoly model in Uruguay, to more laissez faire commercial models in the US and Thailand. We assume that, under all three scenarios detailed below, UK policy will involve robust regulation of adult-only access that prioritises public health, social justice, crime reduction and environmental sustainability. The model will involve measures to avoid over-commercialisation, market oligopolies/monopolies and corporate capture of policy making processes.

- [The cannabis market is domestic only](#)

Currently a legally regulated commercial market for cannabis is not allowed under the UN drug control regime. A number of UN member states and subnational jurisdictions are adopting reforms that put them in technical non-compliance with these treaty obligations and their legal markets all remain domestic only. Wider prohibitions on international trade are maintained. High level debate suggests the UN drug control system is likely to evolve to accommodate changing state practice, but we cannot speculate on the timeline for such modernisation, so assume that there will be no legal import/export trade, and the production and sales of legal cannabis for non-medical uses will be an entirely domestic market in the short to medium term. A future opening-up of international trade could change the economic analysis quite dramatically – and have important implications for sustainable development globally.¹³

² Transform acted as a reviewer for both the ISER and Health Poverty Action reports.

■ Price control measures are implemented

Prices are likely to fall in a commercial market – as has happened in many North American cannabis markets since legalisation.¹⁴ Downward pressures on price can be driven by competition (both with the illegal market, as well as between legal actors), economies of scale, innovation and market efficiencies. Price changes have potentially positive and negative implications for tax revenue (particularly if ad valorem taxes are enacted), consumption patterns and the extent of displacement of the illegal market. Balancing these, often conflicting, priorities justifies government interventions in market pricing, such as corrective tax burdens or Minimum Unit Pricing (MUP), as applied to alcohol in Wales and Scotland. In Uruguay, retail cannabis prices are set directly by the Government. This report assumes government MUP or tax burdens would be sufficient to maintain an average price equivalent of £10 per gram based on current illegal market prices, without adjusting for price inflation.

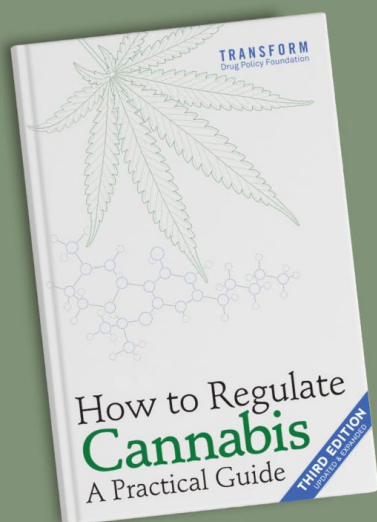
■ The broader socio-economic landscape will be unchanged

We assume that between now and five years after the commencement of regulated access there will be no significant changes in the socio-economic, political or demographic landscape, and no major external shocks (such as wars, pandemics, natural disasters, global economic crises etc). These economic projections are based on current population (2022 census), prevalence of use, prices and tax rates (in reality, all are subject to change).

Unlike tax and licensing revenue, the savings to the criminal justice system impact Treasury accounts only indirectly. Reduced policing costs on cannabis arrests, for example, are likely to see resources internally redirected into other policing priorities, rather than a refund cheque being issued to the Treasury. Some costs, such as prison places, are also effectively sunk costs, also effectively sunk costs, including capital spending on infrastructure such as prison buildings etc. Prison spending is not therefore immediately available to the Treasury on a per prisoner unit cost basis as prison numbers fall. Reduced costs on particular spending areas, however, can be factored into future Treasury budget allocations and spending decisions over the longer term and are therefore legitimately included into the net benefits calculations.

It is the case that many of the variables explored in this report are interdependent. For example, increasing sales tax is likely to increase prices, which may either reduce use, or displace consumers to cheaper informal supplies – both of which would potentially push down the tax take. These complex interactions are difficult to model even with good data. We have based our general assumptions about market dynamics on experiences in North American markets, in particular Canada.

It is also important to acknowledge that any speculative analysis is subject to the biases of the authors. Transform Drug Policy Foundation advocates for responsible regulation of cannabis in the UK and it would be reasonable to assume we have biases towards outcomes favourable to reform (i.e. skewed towards a bigger, more politically enticing total revenue/savings for the Treasury). To attempt to counter potential or perceived bias, our analysis draws significantly on the independent academic study undertaken by Bryan *et al.* for the ISER in 2013, which was subsequently reviewed and broadly endorsed, with some caveats, in an internal report by the Treasury in 2015.¹⁵ This report has tried to lean towards more conservative estimates and assumptions as a default; note, our estimates are generally more conservative than those produced by other reform-oriented groups in recent years. This analysis is, by its nature, speculative. It is designed to inform public debate by presenting a credible set of estimates for the three different models.



THREE POSSIBLE UK CANNABIS REFORM SCENARIOS

Looking at emerging practice around the world, it is evident that there are a number of paths UK cannabis reform could take. For this report we have modelled economic impacts for three different scenarios, drawing on Transform proposals and internationally adopted models:

Model 1: Home-grow provision for personal use, and non-profit membership-based associations with no commercial retail

Under this model, provision is made for adults to cultivate cannabis for personal use within certain parameters including: growing/production limits, no commercial secondary sales, and restricting child access.

In addition, provision will be made for non-profit membership-based associations to produce and supply cannabis to their members within a licensed framework. This non-profit association model was pioneered by activists in Spain, within the country's decriminalisation framework. Since 2000, more than a thousand so-called 'Cannabis Social Clubs' have been established. The model has since been formally incorporated into regulatory models in Uruguay, Germany and Malta. It provides a supportive, community-based environment that seeks to encourage responsible use of quality-controlled products, whilst avoiding the risks of commercialised models and profit-incentives to initiate or increase consumption.

Specific prohibitions on commercial retail under EU law currently restrict member states to home-grow and membership-based non-profit association models of supply. EU responses to emerging practice suggest these can nominally take place within the legal grey area of a permitted decriminalisation framework.¹⁸ Germany has adopted this model, but views it as a transitional model, expressing an aspiration to also develop a regulated commercial retail market in parallel. Germany has announced plans for a localised, time limited 'experiment' for regulated retail in certain municipalities as a way to navigate the EU prohibitions. The international legal status of these plans remains untested, but both the Netherlands and Switzerland have initiated municipal retail pilots similar to Germany's proposals. To note, post-Brexit the UK is no longer bound by the EU prohibitions (although remains bound by UN drug treaties).

Model 2: Hybrid Commercial Retail

This scenario includes home-growing and non-profit association provisions, as in Model 1, with the addition of a regulated commercial retail adult-use market in line with Transform's proposed regulatory framework.¹⁹

Model 3: Hybrid with State Monopoly Retail

This is similar to Model 2, but with cannabis retail run as a state monopoly; the production of cannabis products remains in the regulated commercial sphere. This model draws on the Canadian example, where provinces like Quebec and Nova Scotia have established provincial government monopolies on the retail of cannabis, with a number of other provinces having provincial government monopolies on online sales. There are already precedents for this in alcohol policy. Ten Canadian provinces and territories have local government monopolies on alcohol retailing (off-licence sales) and two have a mix of public and private retail. There are 17 US states that have a monopoly over the wholesaling or retailing of some or all categories of alcoholic beverages. Sweden has a national state monopoly (the *Systembolaget*) for retail sales of alcohol over 3.5%. Under these systems all taxes and profits from commercial (for-profit) alcohol sales go directly to the state, maximising public revenue.

The case for this model relates primarily to the removal of commercial incentives to initiate or increase use, prioritising public health goals over maximisation of private profit. Risks of market consolidation and the emergence of corporate retail monopolies/oligopolies are effectively eliminated, while threats of corporate capture of the policy making process are reduced. The revenues for the government are also significantly increased as they accrue all retail profits, as well as tax revenues. Arguments against the model generally relate to concerns about the loss of competition, and related loss of innovation and efficiencies, that may in turn undermine the ability to meet demand through legal channels, reducing the displacement of the illegal market. With incentives and discipline of competition removed there is a risk of the retail environment stagnating, or governments having decisions on best practice unduly influenced by revenue generation (potentially a risk with taxed commercial models as well).²⁰

AN OUTLINE OF TRANSFORM'S CANNABIS REGULATION PROPOSALS

- Possession of cannabis for personal adult use, and non-profit sharing would be *de jure* decriminalised. There would be no sanction of any kind for possession and personal use of cannabis. Previous convictions for decriminalised offences would be automatically and permanently expunged/deleted.
- Provision will be made for adults to cultivate cannabis for personal use within certain parameters including growing limits, no for-profit sales, and restricting child access.
- A national cannabis regulatory agency would be established to develop and implement a licensing framework for non-profit associations, as well as licensing of cannabis production, processing, transport and retailing. Responsibilities for issuing and enforcement of licences would fall to the relevant local authorities operating within the national framework legislation.
- A licensing framework will be established for non-profit membership-based associations to grow and supply cannabis to adult members. Drawing on emerging models in Spain, Uruguay, Malta and Germany the associations would have membership limits, product quality controls, and minimum unit pricing.

In the Hybrid Commercial Retail model:

- The number/scale of licences held or controlled by any individual or corporate entity would be limited - to prevent market consolidation and the emergence of oligopoly/monopolies, mitigating the risks of corporate/regulatory capture.
- Equity programmes to promote a diverse market for small and medium sized businesses – with preferential licensing access and technical/ capital support to encourage participation of people from disproportionately impacted communities and those who have been historically economically excluded.
- Approved cannabis products sold under licence from retail stores or via online/delivery.
- Retail cannabis products subject to potency limits, sold in unbranded, child/tamper resistant, plain packaging.
- Mandatory labelling of THC/CBD content and health, risk and harm reduction information.
- Minimum Unit Pricing or other price controls.
- Store location, hours of opening and external signage regulated by local authorities within national guidelines.
- Adult only sales and per-purchase sales limits.
- Training requirements for all vendors to provide health risk and harm reduction info at point of sale.
- Tobacco-style ban on marketing, advertising and branding.
- Public consumption in line with alcohol and tobacco controls.

For a more detailed analysis of Transform's proposals for regulation see our book *How to Regulate Cannabis: A Practical Guide* (updated and expanded 3rd edition published in 2022 - available as a free download.)¹⁶

CONSUMPTION AND DEMAND IN THE UK MARKET

To estimate the potential revenue of a legally regulated cannabis market, it is first necessary to establish annual consumption in the UK as a foundation for further calculations. The illegal status of cannabis makes a precise determination of UK consumption demand difficult. In the absence of official sales data or other formalised reporting systems, this report uses available survey evidence on prevalence of use and individual consumption patterns to estimate overall annual demand.

Studies in the UK and other jurisdictions including in Germany and France have taken a similar use-survey approach to establishing a baseline prevalence estimate, while others have referred to verifiable information including seizures and arrests data, which – in our view – is less useful to assessing the size of a market.²¹

There are a broad range of cannabis products, from herbal cannabis and resin, to concentrates, edibles and vapes, but for simplicity, demand is based on a standardised THC potency herbal cannabis product or equivalent.¹

PREVALENCE OF CANNABIS USE

This report relies on self-reported cannabis use data from three key surveys: the Crime Survey for England and Wales, the Scottish Health Survey, and a survey conducted by the Department of Health in Northern Ireland.²² While the surveys ask questions about lifetime use, last-year use and last-month use, this report only focuses on last-year use as it offers the most accurate picture of annual trends.² Reports are fairly similar across the three surveys around the 8% prevalence mark. While the Crime Survey shows that cannabis use in England and Wales has declined over the past 25 years (from 10.5% in 2001), there has been a slight uptick in use over the most recent five-year period, and lifetime use has continued to rise, even as recent usage rates have decreased.

There are some challenges when interpreting prevalence data. As Bryan *et al.* highlight, a figure based on prevalence survey data is likely to be an underestimate for several reasons. Firstly, there's a likelihood of underreporting of drug use in surveys due to possession being a punishable (technically imprisonable) criminal offence, making individuals less forthcoming about their use/criminality to Government officials. Secondly, certain groups and demographics are excluded from the survey. For example, the Crime Survey, by being a household survey, does not include students or people who are unhoused (both of whom are likely to have higher prevalence than the general population).²³ Prevalence surveys also do not account for additional tourist consumption, which could contribute to an increase in overall demand (for perspective, there were 38 million international visitors to the UK in 2023, staying on average a week for each visit).²⁴ In addition, the surveys represent different years (2015, 2021, 2023). To bring the surveys into line with population increase, the prevalence data for Northern Ireland and Scotland is adjusted to 2022 census data, with an assumption that prevalence has remained constant since 2015 and 2021 respectively.

In addition, different age groups are represented across the surveys: England and Wales includes 16-59-year-olds; Scotland 16-75+ year-olds, and Northern Ireland 15-64-year-olds. This raises the issue of inclusion of 15-17-year-olds in the prevalence data. Transform's assumption is that, in a legal cannabis market, people under the age of 18 will not be able to purchase legally regulated cannabis, as with alcohol and tobacco. However, rather than trying to isolate this cohort and remove them from the overall prevalence data, they are included. It is difficult to establish what proportion of the total market consumption is in this age group and given that survey-based prevalence data is almost certainly underestimated, including this group acts as an adjustment for these other factors. There may also be some unavoidable diversion from the legal market to younger using groups. In addition, older age groups are

¹ THC is the main psychoactive ingredient in cannabis

² Lifetime use is considerably higher, with nearly 1 in 3 people reporting having used cannabis at least once in their lives. Last-month use is correspondingly lower, although providing a useful indicator of higher frequency use.

underrepresented for England, Wales and Northern Ireland. However, since prevalence of use is generally very low among older age groups, we assume this will have a minimal impact on overall figures.

Taking the above into consideration we estimate that, at a conservative estimate, around 2,930,000 people are using cannabis every year in the UK. This is consistent with Dame Carol Black’s Independent Review of Drugs which estimated that in 2018/19 2,572,000 people in England and Wales alone used cannabis in the previous 12 months.²⁵

CONSUMPTION FREQUENCY

Drug consumption is not spread evenly across all consumers. For example, just 4% of UK drinkers account for 30% of alcohol consumption.²⁶ Similar patterns are found in cannabis use (indeed most drugs and consumption behaviours) where more frequent consumers represent a larger proportion of market demand by both using more often and also consuming greater amounts on any consumption day.²⁷

Considering this, these calculations segment the total prevalence figure by frequency of use. We then estimate the average amount used per consumption day for each group to bring us to a total annual demand for each consumption group. This approach is taken in Haucap *et al.* ’s detailed work estimating economic opportunities of regulated cannabis in Germany.²⁸ Unlike regulated jurisdictions in North America, where last-year prevalence of use is significantly higher (22.4% in Canada), cannabis use levels in Germany are similar to the UK at around 8%.²⁹ Haucap *et al.* identify three broad groups of use – ‘occasional’, ‘regular’, and ‘intensive’.³⁰ This report uses the frequency of use data provided by the Crime Survey for England and Wales, which provides seven different frequency groups (see Table 2). The surveys for Scotland and Northern Ireland do not provide specific frequency data. Table 1 shows the percentage of different frequency groups and the corresponding figures when applied to total UK prevalence.

While the frequency data gives us some indication of consumption levels, there remains a range within each category which we have divided into three groups - low, medium and high. For instance, reports of using cannabis ‘3 to 5 days per week’ are separated into 3 days (low), 4 days (medium), or 5 days (high) of use each week. Subsequently, an estimation for annual consumption days can be established; for example, someone consuming cannabis three days per week would amount to 156 consumption days per year (3 days x 52 weeks), while someone using four days per week would equal 208 consumption days per year (see Table 3).

FREQUENCY	PERCENTAGE	NO. OF UK	FREQUENCY	LOW	MEDIUM	HIGH
Every day	8.3	243,190	Every day	365	365	365
3 to 5 days per week	6.3	184,590	3 to 5 days per week	156	208	260
Once or twice a week	11.1	325,230	Once or twice a week	52	78	104
2 or 3 times a month	10	284,210	2 or 3 times a month	24	30	36
Once a month	7	202,170	Once a month	12	12	12
Once every couple of months	11	331,0900	Once every couple of months	6	6	6
Once or twice this year	46	1,359,520	Once or twice this year	1	1.5	2
TOTAL	100	2,930,000				

Table 3. The number of days of use in a year for three scenarios

Table 2. Frequency of cannabis use, 16-59-years-old, taken from the Crime Survey for England and Wales 2023³⁵

CONSUMPTION VOLUMES

Although there are now multiple examples of regulated cannabis markets across the world, there remains a paucity of data on how much is being consumed on each given occasion of use. There are some studies that have looked at levels of demand for different groups of consumers. In this report we refer to the work by Light *et al.* (2014), whose calculations on consumption amounts form the basis of both the German and French analyses' findings for consumption.³¹ Remarkably, there seems to be no recent data available. Light *et al.*'s results are based on survey responses in Colorado, which associates specific consumption amounts for each frequency group. Their results provide low, median and high figures of consumed grams per consumption day. While Colorado records higher last-year prevalence rates than the UK, we make the same assumption as Haucap *et al.* that, despite differences in *prevalence*, we would not expect the consumption patterns of consumer groups to be significantly different.³² Therefore, we applied the consumption data from Light *et al.* to the corresponding frequency groups in the Crime Survey (see table 4 below). Again, it is possible that the estimated consumption amounts calculated by Light *et al.* may be underestimated since they are based on self-reporting.

FREQUENCY	LOW (g)	MEDIUM (g)	HIGH (g)
Every day	1.3	1.6	1.9
3 to 5 days per week	1.3	1.6	1.6
Once or twice a week	0.43	0.67	0.67
2 or 3 times a month	0.43	0.67	0.67
Once a month	0.2	0.3	0.3
Once every couple of months	0.2	0.3	0.6
Once or twice this year	0.2	0.3	0.3

Table 4. Light *et al.* consumption amount per consumption day applied to frequency groups taken from the England and Wales Crime Survey³⁶

To arrive at an annual figure, we made the following calculations:

- To calculate the amount consumed per year per frequency group we multiplied the consumption amount per consumption day (in grams) by the number of days of use in a year (e.g. low, every day: 1.3 g x 365 days = 474.5 g). This provides us with an estimate of how much cannabis each consumer uses in each frequency category.
- This figure is then multiplied by the number of consumers, using our estimate of UK prevalence data (e.g. low, every day: 474.5 g x 265,600 consumers = 126,027,200 g). This shows that, at the lower estimate, there are 265,600 consumers using a total of 126 metric tonnes of cannabis every year.
- Applying this calculation to our full range of consumption days and amounts gives us a consumption demand range of 162 metric tonnes to 302 metric tonnes.

Dame Carol Black's Review points to UK demand being toward the middle of this range, suggesting there were 2,592,000 people using an average of 1.2g per using day, for an average of 76 using days per year in England and Wales.³³ Black estimates an annual demand of 236 tonnes for England and Wales, without accounting for use in Scotland and Northern Ireland.³⁴ Given this and the possible underestimate in Light *et al.*'s work, it seems likely that the consumption demand is closer to 300 tonnes for the whole of the UK.

FREQUENCY	NO. OF CONSUMERS	LOW (g)	MEDIUM (g)	HIGH (g)
Every day	243,190	115,393,655	142,022,960	168,652,265
3 to 5 days per week	184,590	37,434,852	61,431,552	91,187,460
Once or twice a week	325,230	7,272,143	16,996,520	32,132,724
2 or 3 times a month	284,210	2,933,047	5,712,621	9,719,982
Once a month	202,170	485,208	727,812	1,455,624
Once every couple of months	331,090	397,308	595,962	1,191,924
Once or twice this year	1,359,520	271,904	611,784	1,631,424
TOTAL	2,930,000	164,188,117	228,099,211	305,971,403
Tonnes		164	228	306

Table 5. Quantity consumed per year per group (no. of consumers x quantity consumed per year)



TAX REVENUE

The amount of tax revenue generated in a legal cannabis market is dependent on several variables, tax rates and the size of the taxable market as it grapples with illegal competition. In estimating revenue, we considered the three different models of regulation outlined in the introduction:

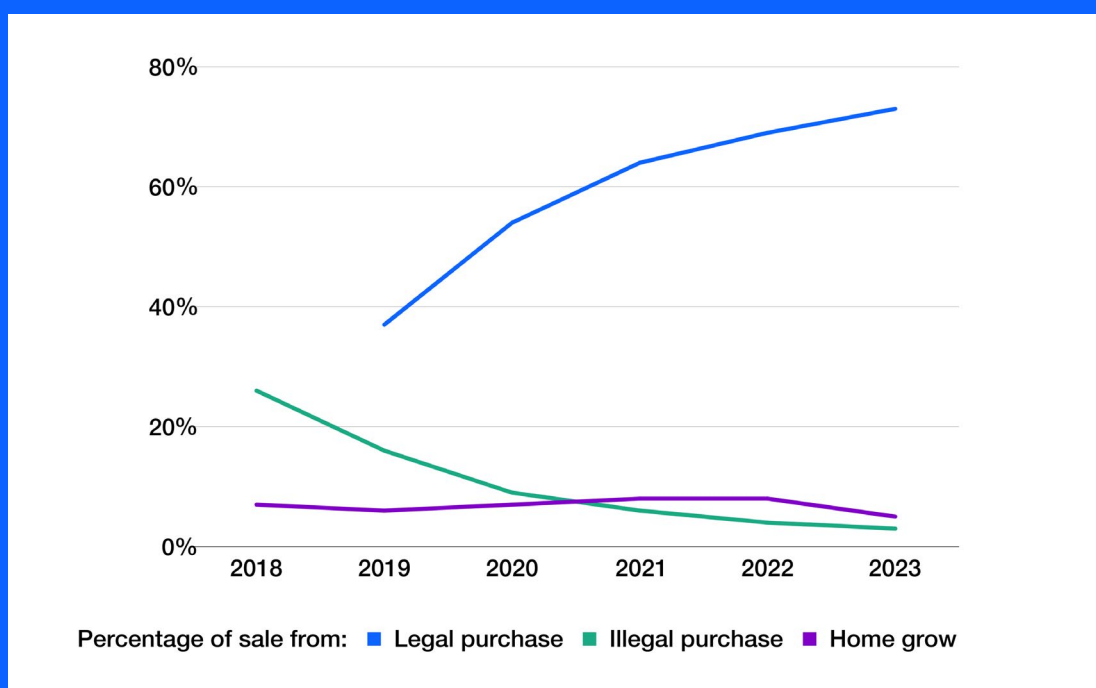
1. Home-Grow and Non-Profit Membership-Based Associations
2. A Hybrid Commercial Retail model allowing for home-grow, non-profit associations and a commercial retail market
3. A Hybrid with State Monopoly Retail model where retail sales are under state monopoly

Tax is explored in this discussion primarily in the context of revenue generation. Tax policy can be deployed to achieve other goals including incentivising/disincentivising consumption of certain products, for example, to support public health goals establishing differential tax rates related to THC content to encourage use of lower potency cannabis, or as a lever to support wider economic, social justice or equity goals (see section on equity, p. 32-34).

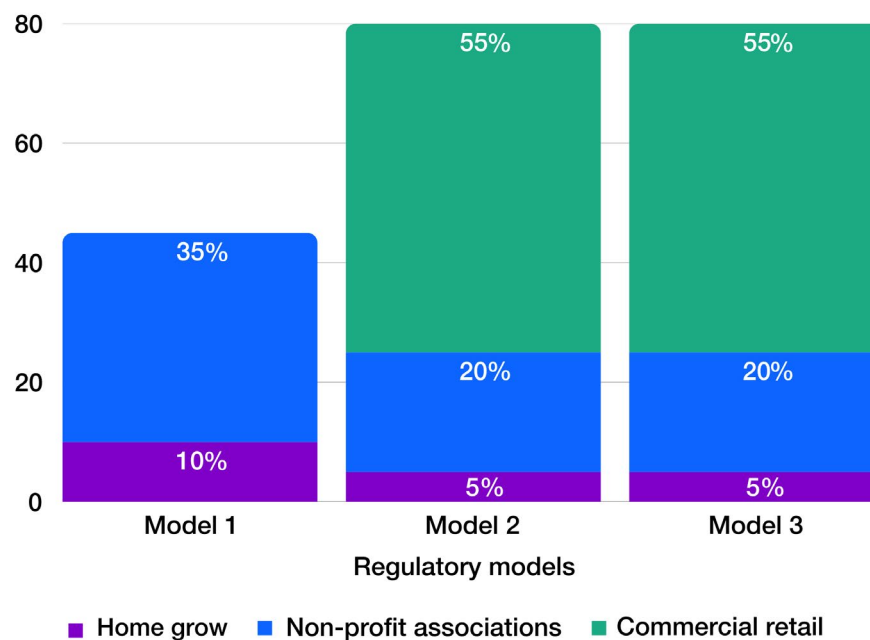
HOW WILL LEGAL CANNABIS DISPLACE THE ILLEGAL MARKET?

A key priority of legally regulating cannabis is to displace and shrink the illegal market and minimise its associated harms. The experience of jurisdictions who have reformed their cannabis laws shows how such displacement is possible, occurring incrementally over a period of several years as legal access is rolled out and new social norms and consumer behaviours emerge.

This report uses data from Canada (the regulated retail market opened in 2018) to help map out possible trajectories of capture/displacement by the UK legal market. Canada provides detailed annual survey data tracking consumer engagement with different forms of legal and illegal access. This data demonstrates the progressive displacement of the illegal market to the legally regulated market over time, with most recent data suggesting around 73% of consumers now purchase from legal shops or online, with 15% sharing among friends/family and 5% sourced from home-growing, only 3% was attributed to an illegal source, with 2% recorded as 'other'.³⁷



Graph 2: Usual source of cannabis among people who used cannabis in the past 12 months 2018-2023 (Government of Canada, 2023)⁵²



Graph 3: Estimates, in %, of the displacement from illegal to legal cannabis access by year five, following legalisation in the UK.

The graph above shows our assumptions for how much of the market will be captured by legal cannabis across the three scenarios modelled in this report. Model 2 (Hybrid Commercial Retail) and Model 3 (Hybrid with State Monopoly Retail) have the same market breakdown – the only difference being that retail outlets are operating under a state monopoly in Model 3. While access to cannabis via membership-based associates does not exist in Canada, we assume that at year five post-reform the total legal market capture will be similar to that in Canada at around 80%. Of this, based on the Canadian data, in the UK we estimate 75% is through legal supply routes, of which 20% is supplied by non-profit associations, plus around 5% assumed to be via home-growing.

We have suggested a 20% figure for the proportion of the market supplied by the non-profit membership-based associations in these two models. There are no mature hybrid markets to inform this speculation as the non-profit model, originating in Europe, has not been adopted in North American jurisdictions and only has recently been adopted nationwide in Germany and Malta. The closest example is Uruguay, which does have home-grow, non-profit associations, and retail models running in parallel. However, the highly restrictive retail model in Uruguay (which registers buyers and limits retail to a small number of pharmacies), has meant a disproportionately large amount of supply is sourced from home-growing and associations (including licensed and informal), and displacement from illegal to legal markets is consequently lower than Canada.

Transform has proposed that a Home-Grow and Non-profit Associations model could potentially exist for a transitional period allowing these supply options to become established before competition is introduced via the commercial retail market introduced later in the roll-out. In the absence of the associations, or if they captured a smaller proportion of the market than the 20% assumed in models 2 and 3, the Canadian experience suggests that the regulated retail market would meet most of this demand instead. In this scenario (i.e. no associations) the total tax revenue would increase in our model, since the tax rate is set at a higher rate for commercial retail sales than for association sales, and associations are not required to pay corporation tax, as they are non-profit entities.

In Model 1, with only home-growing and non-profit associations available, we expect less of the market to be captured at Year 5 (we have assumed only 45% – compared to the 80% for the Hybrid models) as supply would be significantly constrained without availability from commercial retail. Many people may not have easy access to, or want to be involved in, home-growing or association membership. We would, however, expect the proportion of

access to home-growing and non-profit associations to be bigger than the equivalents in the Hybrid model due to the absence of competition from a commercial retail market.

TAXING THE LEGAL CANNABIS MARKET

The scale of any sales tax revenue generated is dependent on a number of variables relating to the different tax and price control options imposed on a regulated market (discussed below).³⁸ The variables include: the price of products and rates of taxation in the new legal market, the total size of the market and levels of consumption of different products, the proportion of the market that is taxable i.e. how much of the illegal market is displaced by the legal one, tax evasion in the form of diversion from the legal production channels, tax avoidance and the intensity of tax law enforcement.

As previously mentioned, for simplicity this report estimates tax on only one type of product – herbal cannabis with an assumed market price of £10 per gram based on current illegal market prices without adjusting for price inflation. We expect there to be a wider range of products available at different prices in a legal market (e.g. varied potency/strains, edibles, vapes etc). These are included in calculations as the herbal cannabis product equivalent. Further, when regulators decide on an optimal target price, it is important to balance the priority of maximising legal market share (by lowering prices) against other goals this may conflict with, including protecting public health (by not encouraging increased use via lower prices) and social equity, or preventing moves towards over-commercialisation and market consolidation, monopolies and corporate capture.

While buying from legal markets has many benefits over illegal market purchases (including quality control, labelling, reliability and avoiding engagement with criminal enterprises), to successfully compete with and displace the illegal market, legal market prices still need to be competitive. Legal market prices that are too high above the illegal market risk dissuading consumers from switching from established illegal market suppliers.

This report considers the potential tax revenue accrued from VAT, a Cannabis Excise Tax, corporation taxes paid on profits, and income tax and National Insurance paid by those employed in the legal cannabis trade. Business taxes paid on the use of premises have not been included in the calculations in this report but would provide a further tax income stream.

A system of taxation based on THC content by weight is the most sensible starting point for any regulating jurisdiction (See [Cannabis Excise Options, p. 21](#)). While this report uses *ad valorem* for simplicity to calculate prospective tax revenue, Transform considers it a suboptimal option and does not recommend it as a tax system. *Ad valorem* tax automatically amplifies changes in pre-tax prices – if pre-tax prices decline (due to economies of scale: decline in price of production, manufacture etc. and absent of other price controls), then the price-based tax automatically declines too, leading to reduced tax revenue. Declining prices over time can be a sign of a successful legal market, where it is meeting consumer demand efficiently, and effectively competing with the illegal market. However, falling prices, as well as reducing tax revenue, can also compromise certain regulatory aims such as public health goals to moderate consumption.

In the proposed Hybrid models where commercial retail is available, the assumed total tax on the sales price is 50%, this is made up of 20% VAT on the retail price and a 30% Cannabis Excise Tax. To provide some perspective on this, analysis in Canada found federal and provincial taxes represent 46.6% of the price of a selection of legal cannabis products including herbal cannabis, pre-roll, vapes and edibles.³⁹ While in Washington State, tax on sales is around 37%, levying the highest tax of any US state.⁴⁰ To further put this in the context of other legal drugs, VAT and excise tax (or duty) and/or other taxes, in the UK constitute around 70% of the retail price of a bottle of whisky, 50% of the retail price of a bottle of wine, 33% of a pint of beer bought in a pub, and 82% of the retail price of tobacco. In this context, a proposed 50% excise tax for cannabis is fairly moderate - the upper limit of Bryan et. al's estimate assumed a tax of 79%.⁴¹ Under the Hybrid with State Monopoly Retail model, the profit on sales would also constitute state revenue – so the Government would receive around 70% of the sales price.

CANNABIS EXCISE TAX OPTIONS

As with alcohol and tobacco, we would expect a special duty to be paid on cannabis – as has been the case in almost all legal cannabis jurisdictions. There are several options for administering such a tax and many different variations exist across regulating jurisdictions. Each has their own benefits and downsides depending on which aims are being prioritised i.e. maximising tax income versus limiting/discouraging increase in consumption and so on.

■ Percentage of retail price (*Ad valorem*)

This tax works like a general sales tax (in addition to VAT). The tax is calculated as a percentage of the retail price which can be applied before or after VAT is added and is paid by consumers. Ad valorem tax is simple; by taking a percentage of the retail price as tax revenue it doesn't require indexing or product testing requirements. However, unlike with THC-based taxing, where the tax can go up with increasing potency, it provides a weaker lever to control product price. Something that could be used, for example, to steer consumption towards lower potency products.

■ Weight-based

A tax on weight of herbal cannabis is easier to implement than a THC-based tax (below), but risks creating incentives to increase potency while keeping the weight of the product low. Moreover, there is the complication of different tax rates between different herbal products e.g. flowers, leaves. A weight-based tax can be an advantage for tax collection if prices decrease, as this will not be reflected in tax revenue which will remain static based on weight (except for inflation adjustments). This can also be a disadvantage, however, if prices were to increase (although price decrease is a more likely scenario based on experience in regulated jurisdictions).

■ THC/potency-based

Basing tax on THC content more directly taxes the active drug content in the cannabis product. Canada taxes herbal cannabis by weight, but taxes other products at \$1.00 per 100mg of THC.⁵³ In Connecticut, the THC-based tax rate is \$2.75 per 100 mg of THC in edible products, \$0.65 per 100 mg of THC for herbal cannabis and \$0.90 per 100mg of THC in other products.⁵⁴ Differential tax rates linked to THC potency can provide a policy lever to encourage production and use of less potent products, potentially reducing negative health impacts. This type of drug content-based tax roughly mirrors many alcohol tax models, which have adopted higher tax rates for more concentrated alcohol in an attempt to reduce total alcohol consumption. THC-based tax systems encourage producers and laboratories to measure THC content accurately.

Under the Home-grow and Non-Profit Associations model, Transform proposes a reduced Cannabis Excise Tax of 10%. This reflects the likely higher unit production costs of smaller scale production and takes into account the harm reduction benefits that membership-based associations bring, as well as the equity benefits of supporting non-profit smaller producers and suppliers. We assume that products sold in non-profit associations will have VAT added to them in line with current UK rules.⁴²

Post-legalisation, legal market production costs are likely to go down over time due to innovation, increasing efficiencies and economies of scale as the market settles and matures. In Haucap *et al.*, production cost estimates are based on Colorado data. The average production cost per gram in 2018 in Colorado was approximately \$6, in 2019 it was approximately \$4.50.⁴³ Haucap *et al.* assume, based on this data, that in a completely saturated legal market, the average pre-tax price would reflect the same cost of pre-tax cannabis in Colorado in 2019 of \$4.53.⁴⁴ For the purpose of our calculations we use the 2019 Colorado figure to assume an average production cost of £3.65

per gram.⁴⁵ Production costs in this case include multiple factors including building costs, utilities including energy and water, processing, logistics and wholesale to retail distribution. In reality, differences in regulatory compliance requirements, licensing fees, minimum wage levels, utility costs etc. will affect production costs as well.

Considering the above, we calculated the Cannabis Excise Tax and VAT that would accrue to the Government using the different scenarios and their predicted legal market capture. So for the Home-Grow and Non-Profit Associations model, we multiplied the Cannabis Excise Tax and VAT collected per gram by the total demand expected to be met by non-profit clubs in each scenario. For example, Cannabis Excise Tax revenue is £0.83 x 105,000,000 = £87,465,000.00 and VAT revenue is £1.67 x 105,000,000 = £175,350,000.00. The same calculation is applied to the Hybrid models but adjusting the Cannabis Excise Tax to £2.50 per gram for the commercial portion of the market, as per Table 6.

Additionally, we include the retail profits that would go to the Government under the Hybrid with State Monopoly Retail model – for simplicity, this is assumed to be half of the profit per gram (£1.09) with the other half of the profits going to the production sector which is not under state monopoly control.⁴⁶ To get to an estimate of retail profits, we multiply half of the assumed profit on a gram of herbal cannabis (see Table 7) by the total commercial demand in tonnes displaced in the Hybrid models (165 metric tonnes). This gives us a figure of £179,850,000.

Market price	10.00
Of which VAT (20%)	1.67
Cannabis Excise Tax (10% on pre-VAT price)	0.83
Production costs	3.65
TOTAL TAX PER GRAM:	2.50

Table 6. Disaggregated price of 1g of herbal cannabis in non-profit associations (£)

Market price	10.00
Of which VAT (20%)	1.67
Cannabis Excise Tax (30%)	2.50
Production costs	3.65
Profit	2.18
TOTAL TAX PER GRAM:	4.17

Table 7. Disaggregated price of 1g of herbal cannabis in commercial retail (£)

	MODEL 1	MODEL 2	MODEL 3
Cannabis Excise Tax	87	462	462
VAT	175	376	376
Profits	0	0	180
TOTAL:	262	838	1,018

Table 8. Tax revenue for each model plus profits for the state monopoly retail (rounded to nearest £million)

CORPORATION TAX

Corporation tax is payable on commercial company profits at a rate of 25% on profits over £250K, and at a lower rate of 19% for profits under £50K, with a sliding scale between these two values.⁴⁷ For our corporation tax revenue estimate we have included corporation tax revenue on profits at only the lower rate of 19% for the Hybrid Commercial Retail model as it is unclear what proportion of the market surplus would be liable for the higher rate, including various forms of tax relief related to capital investment and so on. In this scenario, total profits on cannabis are estimated to be £359,700,000 (£2.18 x 165,000,000). 19% corporation tax on this profit equals £68,343,000. To calculate corporation tax for the Hybrid with State Monopoly Retail model, we subtracted 50% from the Hybrid Commercial Retail model total (£34,171,500);

since retail profits accrue to the state, tax will only be payable on the commercial production sector. Corporation tax isn't calculated on the Home-Grow and Non-Profit Associations model as the associations are nominally non-profit entities – with surplus reinvested in the associations or other social enterprises/benefits.⁴⁸ Were corporation tax payable on association surplus this would potentially generate an additional £20-40 million.



INCOME TAX

The newly regulated industry will create a significant number of new legal jobs in production, retailing, and in various ancillary and regulatory services. These jobs will all generate additional tax revenue for the Government. These are either 'new' jobs that did not exist previously, or are jobs undertaken by people previously working in the illegal/informal cannabis economy, where income tax and National Insurance was not paid. Even where the same people are employed doing similar work, jobs in the legal market can be considered 'new' jobs within the legal economy, generating new tax revenue.

Estimates for the number of full time jobs or equivalent that would be created by a new industry have been made in recent economic modelling studies for Germany, Czechia, France and Switzerland, significantly based on data from legal cannabis industries in North America.⁴⁹ The German analysis is based on Colorado data suggesting that in 2019 there were 39,672 active occupational licences (required for working in the cannabis sector) which, according to a 2016 analysis, translates into full time jobs at a rate of 0.62.⁵⁰ This gives an estimate of 24,755 full time equivalent (FTE) jobs in the Colorado industry. On the basis of total Colorado demand at 357 metric tonnes, this gives 69 full time job equivalents (FTE) per tonne of cannabis produced. The German study then uses this to calculate total German jobs, based on 400 tonnes estimated demand, giving 27,600 jobs FTE.

We have adapted the Colorado estimate of 69 FTE jobs per tonne to our UK estimate for the Hybrid Commercial Retail model. We have incorporated a downward adjustment to the total jobs figure for the state monopoly retail and Home-Grow and Non-Profit Associations models, based on our assumptions for the lower levels of regulatory staffing required (see p. 25):

- In the Hybrid Commercial Retail model, legally supplying 225 tonnes (i.e. 75% of the total demand of 300 tonnes) would create 15,525 legal jobs (including 2,000 for regulatory staffing).
- In the Hybrid with State Monopoly Retail model employment, we assume employment needed for the regulatory sector to be 25% lower, i.e. 1,500. This would give a reduced total of 15,025 (see p. 24).

- Using the same calculation as above, the Home-Grow and Non-Profit Associations model, supplying 105 tonnes of total demand (35% of 300 tonnes) via the regulated associations. However, this total needs to be adjusted down to reflect the lower number of jobs needed to fulfil regulatory requirements. $15,025 \times (105/225)$ giving a total of approximately 7,000 jobs.

US studies have suggested that the median cannabis industry earnings are on average 10% higher than median US earnings. Assuming that the employees in the new cannabis industry earn an average median gross UK salary of £37,430 per annum, Treasury revenue from income tax and revenue from National Insurance contributions (NIC) per employee is calculated below.⁵¹ For simplicity the total figure is rounded down to £10,000, reflecting the assumption that not all staff pay full employers NICs (some may be self-employed, whilst smaller businesses will not pay the full employers NICs rate on all salaries).

Income tax (after tax-free allowance)	4,972
Employee National Insurance contributions	1,989
Employer National Insurance contributions	4,864
TOTAL	11,825

Table 9. Income tax and National Insurance contributions per employee (£)

- Home-Grow and Non-Profit Associations:

The total number of tax-paying employees in the industry for Model 1, at 7,000 is significantly less, reflecting the assumption that the legally regulated associations model captures around one third of the total demand (a further 10% made up from home-growing), and that the regulatory burden is correspondingly smaller. This assumes that full time equivalent salaries are the same, with an average of £37,430. Total revenue from income tax and NICs is therefore: $7,000 \times 11,825 = £82,775,000$

- Hybrid Commercial Retail:

Total Treasury revenue from income tax and NICs: $15,525 \text{ employees} \times 11,825 = £183,583,125$

- Hybrid with State Monopoly Retail:

We assume the total number of employees in the industry to be less (15,025) for the Hybrid with State Monopoly Retail model, given the lower regulatory burden of non-commercial retail. Total Treasury revenue from income tax and NICs is therefore $15,025 \times 11,825 = £177,670,625$

Home-grow and Non-Profit Associations	83
Hybrid Commercial Retail	184
Hybrid with State Monopoly Retail	178

Table 10. Total income tax and National Insurance revenue (rounded to nearest £million)

COSTS OF THE REGULATORY FRAMEWORK

The regulation of a new cannabis market would involve costs across a number of national and local institutions responsible for the regulation of retailing (age controls, hours of opening etc.), production standards (health and safety, environmental standards etc.), products (quality control, testing, labelling etc.). Enforcement against diversion and remaining illegal operators is also arguably a regulatory cost but is mostly covered under enforcement costs (see p. 27).

We assume there would be a national regulatory agency responsible for setting standards, establishing the licensing framework for different elements of the supply chain, and overseeing regulatory compliance and enforcement – although most licensing and enforcement would, as with alcohol, likely be the responsibility of local authorities.

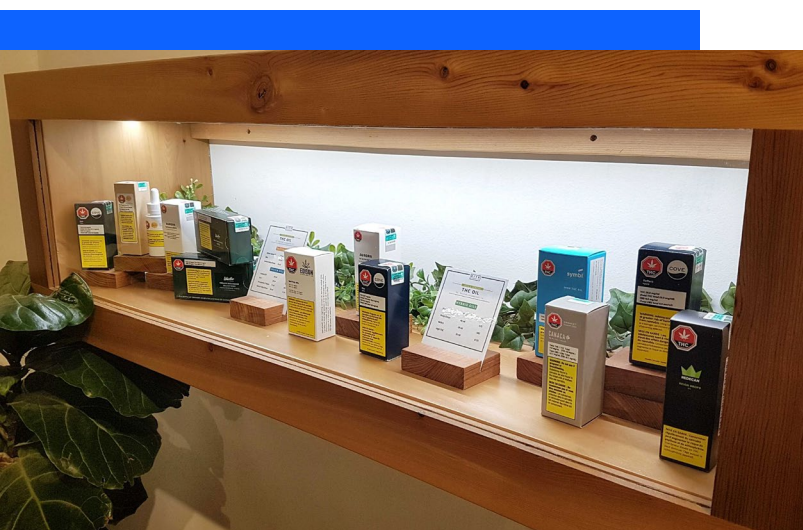
A more precise figure for the costs of these regulatory institutions will depend on the nature of the regulatory models adopted and how the market evolves over time. It will also vary across the three models proposed (Home-Grow and Non-Profit Associations, Hybrid Commercial Retail, and Hybrid with State Monopoly Retail) which require different levels of regulation.

Unfortunately, no aggregate data is available for the equivalent regulatory costs for alcohol and tobacco to allow comparisons or inferences – not least because much of the work is embedded within other institutions and hard to disaggregate. However, looking at the costs of UK regulatory bodies of similar scale to the assumed regulatory requirements of a national cannabis regulatory agency can provide some estimate:

- The Medical Health Regulatory Agency – the UK regulator for the entire supply chain of medicines, medical devices, and blood components for transfusion – with around 1,200 staff, had a budget of around £160 million in 2021-22.⁵⁵ Fees for services such as licensing, inspections, risk management and clinical trials cover the cost of the agency.
- The Health and Safety Executive – the UK regulator for workplace health and safety: providing advice, undertaking risk assessments and enforcing compliance with health and safety regulations – had over 2,600 staff and a budget of £261 million in 2021-22.⁵⁶ Income recoups around £100 million of this total.
- The General Medical Council – the UK regulator for doctors, setting standards, holding a register, quality assurance, education, and investigating complaints – has a budget of around £130 million and employs 1,700 staff.⁵⁷

We anticipate a regulatory entity, or entities (with staff and costs split between central and local government functions) overseeing a commercial retail supply chain and non-profit associations at approximately the level of these institutions – with around 2,000 staff at a cost of £200 million.

For the Hybrid with State Monopoly Retail model the regulatory burden is anticipated to be considerably smaller as the state will be effectively self-regulating, with regulation more focused on commercial production elements of the supply chain for example, product quality testing, alongside regulation required for the non-profit associations. We have halved the



estimated staff and total cost for this model to £100 million and 1,000 staff.

For the Home-Grow and Non-Profit Associations model, the regulatory burden would be considerably smaller again – regulating a smaller proportion of the market (our estimate is 35%), and with lighter touch regulation. We estimate a £30 million budget with 300 staff.

In practice, however, as is the case for other legal products such as alcohol or pharmaceuticals, fees for licensing (of production, transport, retail, and associations), inspections/compliance, and mandatory product testing, would recoup a substantial proportion, if not all of the regulatory costs for the Government. These costs are factored into production or retail business costs. The net annual regulatory costs to government - beyond the initial outlay in establishing the regulatory body – will therefore be marginal. The precise figure will depend on the different model, the nature of the regulatory regime, and the regulatory fees charged by the Government. For this report's calculation we have assumed that fees will cover 80% of regulatory costs – this is based on data from Canada suggesting 65% recovery by 2021-22, three years after legalisation, and trending upwards.⁵⁸

On this basis net regulatory costs for the three models would be:

- Home-Grow and Non-Profit Associations: £6 million
- Hybrid Commercial Retail: £40 million
- Hybrid with State Monopoly Retail: £20 million

COST AND SAVINGS FOR THE CRIMINAL JUSTICE SYSTEM

The criminalisation of cannabis use and supply has a significant impact on UK Criminal Justice System (CJS) costs. For example, in 2020/21 police recorded 133,805 cannabis possession offences.⁵⁹ Canada now provides real-world evidence to support the view that criminal justice savings of regulation would be considerable. In 2020, two years after the first legal retail outlets opened, an official review found Canada's cannabis-related costs of policing, courts and correction services fell by a third, from \$1.6 billion to just over \$1 billion (\$600m decrease).⁶⁰

However, there is relatively little data for the UK that disaggregates spending on police enforcement directed against cannabis offences, or additional cost burdens these generate across the CJS. The best working estimates remain those made by Bryan *et al.* (2013), which is based on pre-2010 data, and earlier research, much of which dates back over 20 years. As Bryan *et al.* note, these earlier studies used different methodologies that provide a huge range of values, for example estimated police costs per cannabis arrest range from £130 to £4,605.⁶¹

In the absence of other data or analysis we have based our estimates on Bryan *et al.*'s work, acknowledging, as they do, the large uncertainties in the figures and generally erring on the side of caution. We have also made adjustments for changes that have occurred in policing over the intervening years, our assumptions about the nature of enforcement under the proposed legal regulatory regimes, and population changes.

Criminal justice savings are challenging to calculate as many of the costs are fixed or 'sunk costs' in CJS infrastructure. So, for example, if one person is released from a prison of a 100 people that does not immediately translate into a 1% saving (the prison kitchen has fixed costs for cleaning, heating etc. that do not change whether they are preparing food for 99 or 100 people). However, over the longer term, particularly where more significant falls in demand are evident - for courts, prisons, CPS, legal aid, police etc - this will translate into proportionate staff and resource savings (for example the closing of a prison as numbers fall) that have a clear and measurable economic impact. The economic value is still meaningful, even where saved resources are redirected internally with a given institution or entity (rather than resulting in a direct budget cut – for example, police funding moving from dealing with cannabis offences to domestic violence).

Revenue from fines has not been included due to the lack of data (breaking down different disposals and related fines collected), and the relatively small values involved. While the total number of cannabis related fines may number in the tens of thousands, in terms of revenue the fines are relatively small, averaging around £100 – suggesting total revenue is at most between £1 and £3 million (Bryan *et al.* estimated £0.9 million for England and Wales in 2010).

POLICING

Bryan *et al.* estimated cannabis-offence specific policing costs in 2010 at approximately £100 million for England and Wales, although they describe the range of uncertainty as 'very large'. Bryan *et al.* notably exclude costs of customs (policing of illegal cannabis import/export); 'this means we will underestimate enforcement costs to some degree'.⁶² In the year ending March 2023, the UK Border Force seized 'the highest number of total cannabis seizures on record' (20,211 seizures) totalling 46.79 tonnes of herbal cannabis and 918 kg or resin.⁶³ It is therefore reasonable to assume a non-trivial proportion



of the Border Force budget of £1.18 billion (2023/24) is spent on enforcement aimed at, or resulting from, cannabis.⁶⁴ It is also reasonable to assume most of these seizures, and attendant costs, would not occur if legal cannabis were available within the UK. However, in the absence of meaningful data on this, like Bryan *et al.*, we have not included a figure for these potential savings.

To translate the Bryan *et al.* cannabis policing cost estimate to a 2024 UK-wide value it needs to: include Scotland and Northern Ireland (approx. +10%); account for population increase over the past 14 years from 63 million to 69 million (approx. + 10%); factor in inflation of around 3% per annum on average into cost estimate calculations significantly based on hourly police costs (approx. + 40% total). The UK 2024 adjusted figure based on the Bryan *et al.*'s methodology would therefore be around £165 million.

However, the nature of cannabis policing in the UK has also shifted – with falling numbers of prosecutions, and increasing numbers of alternative sanctions including cautions, community resolutions, cannabis warnings, and most recently, diversion programmes. Illustrating this, the number of cannabis prosecutions in England and Wales fell by more than half, from 24,982 in 2010 to 12,043 in 2020, and 10,394 in 2023.⁶⁵

These non-prosecution sanctions require much less police time and so cost significantly less. Bryan *et al.*, for example, estimate that a cannabis warning costs approximately one tenth in police time of the cost of an arrest and prosecution. Indeed, much of the impetus for a change in cannabis policing has come from the police themselves. Many senior police, making decisions about how to allocate limited resources (and generally facing resource cuts and/or increased demands), view arrests and prosecutions for cannabis offences, particularly possession, as not only disproportionate sanctions, but also a disproportionate burden on police resources given the highly questionable efficacy and, often, counterproductive nature of such police work.⁶⁶

On the basis that around half of cannabis disposals for possession have moved from more expensive arrest and prosecution to less expensive non-arrest disposals, we estimate (in line with Canada's experience) an approximately one third reduction in policing costs relative to 2010 levels. This would adjust the £165 million estimate down to £110 million.

Under all of our reform scenarios, cannabis possession offences would fall dramatically to near zero (it may still be a civil offence to be in possession in certain scenarios, or to consume in certain spaces). We assume that cannabis supply offences would fall roughly proportionately to the decreasing size of the illegal market. Our assumption is that, by year 5, this would shrink by around 45% under the Home-Grow and Non-Profit Associations model, and by 80% under both the Hybrid models (£50 million and £88 million in savings respectively).

Other cannabis related offences (not included in the original estimate) such as policing of cannabis offences related to driving under the influence are assumed to be unchanged (see section on [Driving under the Influence](#) p. 40).

It may well be the case that enforcement against the remaining illegal market would change in its nature or intensity, but this could work both ways. It is likely that robust enforcement against remaining illegal actors will be deemed necessary to establish and maintain the integrity of any new legal access models. Conversely, it may be that enforcement against cannabis offences are deprioritised more generally or sentenced less harshly – as has arguably been the case in Canada, and some US states. We note, for example, that in 2017 in Canada (the year before cannabis legalisation) there were 10,968 trafficking, production or distribution offences related to cannabis. After legalisation, in 2020, there were only 117 trafficking, production or distribution crimes related to cannabis.⁶⁷ However, a more recent comprehensive review of enforcement expenditure led to recommendations for an increase to counter illegal actors that are compromising the legal market.⁶⁸

STOP AND SEARCH

Bryan *et al.*'s estimates focus on arrests and prosecutions, but this omits costs of the significant amount of police time engaged in investigation that can lead to an offence being identified. This notably includes stop and search.

While the number of stop and searches has fluctuated significantly over the past 20 years, in the most recent 2023 data there were 530,000 stop and searches of which approximately 60% were for drugs and of that, 80% were for cannabis – this is roughly half of the total.⁶⁹

While there are no official estimates for the costs of stop and searches, they were estimated in 2010 (based on taking 15 mins of police time per search) as costing £20-25. If there were 265,000 stop and searches for cannabis, plus approximately 10% if we include Scotland and Northern Ireland (bringing the total to 291,500), with an inflation adjusted estimate of £30 per stop and search – this puts the cost of cannabis stop and searches (before any disposal) at approximately £8.75 million per year.⁷⁰

Under a decriminalised and legalised cannabis regime it is assumed that the number of cannabis stop and searches would fall to near zero (even if cannabis is found in stop and searches for other reasons). Depending on future law reforms, some stop and searches might continue – for example, for possession in certain environments, for suspected illegal supply, or for driving under the influence offences (although such driving related offences would take place under a different investigatory process). Stop and searches for other offences might increase (stop and search remains a highly contentious, politicised, often polarising, issue within public law and order discourse, and within the police).⁷¹ However, it seems reasonable to view the inevitable drop in cannabis stop and search as a cost saving at or near the total current expenditure, i.e. £8.75 million, notwithstanding possible changes in stop and search policy before any proposed cannabis law reforms occur. This saving would apply across all proposed scenarios.

COURT PROCEEDINGS

Bryan *et al.* estimate the 2010 costs of court proceedings at £97 million based on estimates of average costs of crown and magistrates court proceedings, and numbers of each for supply and possession offences. Bryan *et al.* however note that these figures ‘are likely to be underestimated, since they exclude any of the costs involved in court proceedings which end with a ‘not guilty’ verdict or which are initiated but not pursued to verdict.’⁷²

This figure of approximately £100 million should be subject to similar modification for our calculation, including Scotland and Northern Ireland, increases in population, and Retail Prices Index/wage inflation, which takes it to around £165 million. However, linked to changes in cannabis enforcement noted above, falling numbers of cannabis-related prosecutions have lowered the total numbers of court proceedings relative to 2010. This has most significantly affected possession offences, with supply offences still likely to proceed to prosecution. Possession offences are most commonly dealt with through less expensive magistrates’ court proceedings, so the reduced cost burden per case is lower. However, we estimate a 20% reduction in total court costs, reducing the total adjusted cost down to £132 million. We have based an estimate of savings on changes to the relative size of the market under the different reform scenarios, with £59 million in savings for the Home-Grow and Non-Profit Associations model, and £106 million in savings for both the Hybrid models as they would capture a higher proportion of the illegal market.

PRISONS

Information on incarceration is provided for drug offences generally, but breakdown by drug is not routinely published or easily available, despite the Government holding this information. Shifting public opinion on the proportionality of punitive cannabis sentencing may help explain this. There has also been no appetite to assess the impact of potential cannabis reforms on the prison population – even in the context of a growing prison overcrowding crisis. Asked in a Parliamentary Question in 2023 what the impact of cannabis decriminalisation (note: not legalisation) on prison population would be, the Minister for Policing, Chris Philp, stated that ‘No assessment has been made – the Government has no current plans to decriminalise cannabis’.⁷³

The Government response to a 2016 Parliamentary Question said: ‘According to centrally held data, as at 30 June 2015, there were 1,363 offenders in prison custody for cannabis related offences in England and Wales. This number includes all offenders who have had their offence categorised as a “drug offence” and in which cannabis is explicitly stated in their offence description. This number does not include instances where cannabis may have been a contributing factor to the main offence committed.’⁷⁴

A more recent Government response to a Freedom of Information request in February 2020 stated that: ‘As at 31 December 2019 (latest currently available), a total of 853 convicted prisoners at all prison establishments in England and Wales had an associated “cannabis-related” offence.’⁷⁵ A more detailed breakdown of these offences is not available. Numbers sentenced to prison annually do not provide a clear guide of how many will be held in prison for a particular offence or offence category (i.e. cannabis) at any one time, as sentences, or sentences served, may be above or below one year. It is assumed most are for more serious supply offences – although some may be for possession in the context of probation violations, aggravating circumstances, repeat offences, or concurrent sentencing along with other offences.

It seems likely that changes in cannabis policing and sentencing will have continued the downward trend in cannabis related incarceration seen between 2015 and the end of 2019, (although COVID may have disrupted this trend). The Government number also does not include Scotland and Northern Ireland, for which data is not accessible. Assuming offending and sentencing took place at a similar rate, including Scotland and Northern Ireland would add approximately another 10% – taking the total to around 960. The 2019 FOI data also specifically excludes prisoners awaiting trial on remand – for which no data was immediately available. We have therefore increased the total to 1,000. This total also does not include offences that were related to the illegal cannabis market but not recorded as such – including offences related to child exploitation, violence, weapons, modern slavery etc.



Using the England and Wales data, and £50,000 a year cost per prisoner provides a rough annual cost of £50 million for cannabis offence related incarceration.⁷⁶ This is lower than the Bryan *et al.* estimate of £84 million (which was calculated at a lower cost of £45,000 per prisoner per year) mostly due to the lower estimate of prison months served in the different study years.

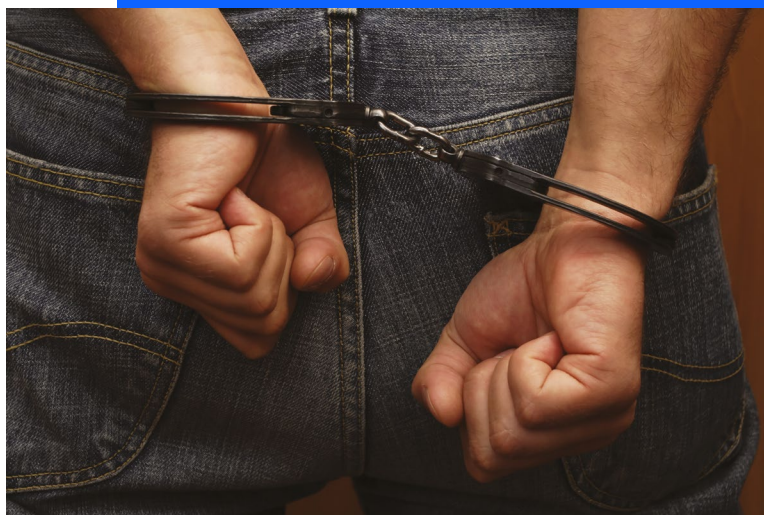
MANY SENIOR POLICE, MAKING DECISIONS ABOUT HOW TO ALLOCATE LIMITED RESOURCES, VIEW ARRESTS AND PROSECUTIONS FOR CANNABIS OFFENCES, PARTICULARLY POSSESSION, AS NOT ONLY DISPROPORTIONATE SANCTIONS, BUT ALSO A DISPROPORTIONATE BURDEN ON POLICE RESOURCES

Even if incarceration for possession offences falls from its current small number to zero, it is assumed that at least some incarceration related to cannabis supply would continue post-reform, from policing of the remaining illegal market. People are, for example, still imprisoned for illegal activities related to alcohol and tobacco supply. How significant this number would be for cannabis supply will depend on the size of any remaining illegal market, the intensity of policing efforts directed against it, and any changes to penalties or sentencing that accompany wider reforms. In the absence of clarity on these latter two variables, we base our estimated savings on the assumed size of the illegal market under the different scenarios, plus a 50% reduction in prison sentencing (by

year 5) for offences related to the remaining illegal markets. So a 72.5% reduction under the Home-Grow and Non-Profit Associations model and a 90% reduction under both the Hybrid models estimates savings of £36 million and £45 million (note Bryan *et al.* assumed a 100% reduction - giving them a significantly larger £84 million benefit).

THE CROWN PROSECUTION SERVICE

In 2023-24, the Crown Prosecution Service (CPS) had an £800 million budget, prosecuting 419,000 cases.⁷⁷ Approximately 11,000 of these were for cannabis specific offences in 2023, or 2.6% of the total.⁷⁸ An unknown additional percentage will be for illegal cannabis market related offences, but based on the assumption that in the region of 2.5% of the CPS caseload is cannabis related, and that the cost of processing a cannabis case is equal to the average case cost, this amounts to a cost of approximately £20 million.



An approximate potential saving for the reform scenarios is based on the assumed change in the size of the illegal market post reform – so 80% for both of the Hybrid models (£16 million) and 45% (£9 million) for the Home-Grow and Non-Profit Associations model. The number of prosecutions for licensing violations under the new regulatory regime is assumed to be negligible - with most being dealt with by civil proceedings administered by regulatory agencies, rather than criminal prosecutions.

LEGAL AID

Legal Aid costs around £1.9 billion a year – providing legal advice and counsel for those unable to pay for it themselves and meet certain criteria. An unspecified proportion of this total is used in relation to cannabis related arrests and prosecutions. There is no publicly available account of what this proportion is, making estimations particularly difficult. The total spend on legal aid has dropped significantly since 2013, when the Legal Aid, Sentencing and Punishment of Offenders Act (LASPO) reduced the scope of legal aid in England and Wales, falling from £2.9 billion in 2012–13 to £1.9 billion in 2022–23. The restrictions introduced under LASPO on availability included certain cannabis offences/cases. An estimate (by the Taxpayers' Alliance) that 4% of legal aid case load is related to cannabis (giving a 2015 total of up to £60 million) seems high in this context, especially given evolution in policing of possession offences. However, a lower figure of £25 million does not seem unreasonable given the volume of arrests and prosecutions still proceeding which can be redistributed to those who require Legal Aid.⁷⁹

Again, cost/benefits of reform are calculated in relation to assumed contraction of the illegal market – 45% (£11.25 million in savings) for the Home-Grow and Non-Profit Associations model and 80% (£20 million savings) for the Hybrid models.

COSTS OF LIFE SCARRING

Bryan *et al.* include a figure in their estimates for the economic impacts of criminal records for cannabis offences on potential earnings and related tax income. This is a potentially very significant economic impact that is often overlooked in drug policy debates. They note that in 2010 there were almost five million enhanced Criminal Records Bureau (CRB) checks (now called Disclosure and Barring Service (DBS) checks) and there is good evidence that employers are prejudiced against job applicants with criminal records. In certain health, legal, and public servant roles a criminal record is prohibitive.

Bryan *et al.* calculate a figure of £23 million annually on the basis of the number of prosecutions, the average impact on earnings (an estimated 19% reduction from a criminal record), and the percentage of those who are first time arrestees at risk of scarring. Adjusting the £23 million estimate to include Scotland and Northern Ireland, population increase, and wage inflation since 2010 increases the figure to £40 million for the UK in 2024. This may well be a conservative estimate, given most people whose employment has been impacted are unlikely to see their income increase immediately after a single year to the level it would have been if they had no criminal record. i.e. there will be a cumulative scarring impact over a number of years.

However, shifts in policing towards non-prosecution and civil sanctions have likely reduced this as fewer criminal records are being issued for cannabis. Additionally, in 2023 the Government reduced the amount of time required before many offences are considered 'spent' to one year, including many drug possession offences. A spent offence

IT IS BOTH INCONSISTENT AND UNJUST TO ONLY SEEK THE END OF MASS CRIMINALISATION GOING FORWARD WITHOUT ADDRESSING THE CONTINUED STIGMA OF CRIMINALISATION CARRIED BY THOSE CAUGHT UNDER PAST LAWS

does not need to be revealed to many prospective employers and will not show up on a basic background check. However, there remains a fairly wide range of jobs where applicants must still declare the offence, and it will show up on an enhanced background check. So, while this change means longer-term scarring impacts for many will be reduced, they are not eliminated for all. In the absence of adequate data we have excluded an estimate for reduction in life scarring from our total estimate.

Bryan *et al.* include a value of around £12.9 million for lost economic output and income tax due to incarceration. A figure has not been included in our calculations as relevant data to make an updated calculation was not easily available. The size of any taxation contribution forgone due to incarceration, and the potential savings had these individuals not been in prison (given lower levels of incarceration than in 2010) is likely to be in the single digit millions.

OPPORTUNITY FOR ECONOMIC AND SOCIAL JUSTICE

The historic harms of criminalisation under prohibition are not simply erased through legally regulating cannabis. For decades, punitive cannabis law enforcement has disproportionately impacted socially and economically marginalised communities, particularly the Black community, and the wider legacy of mass criminalisation is etched into millions of criminal records.⁸⁰ Black people are 8.3 times more likely to be stopped and searched for drugs than white people despite using drugs at a similar rate, and are convicted of cannabis possession at 11.8 times the rate of white people.⁸¹ A criminal record has long-term impact on an individual's life outcomes, perpetuating the trauma of unjust criminalisation by drastically reducing employment and life opportunities. It is both inconsistent and unjust to only seek the end of mass criminalisation going forward without addressing the continued stigma of criminalisation carried by those caught under past laws. It is necessary, therefore, for regulating jurisdictions to respond to this issue from the outset by ending criminalisation, deleting past criminal records for activities previously criminalised but now within the scope of the law, as well as releasing those serving sentences under past laws.

There is increasing global evidence on the different ways that legalising jurisdictions have sought to go about achieving this, with many committing funds from the tax revenue of the legal cannabis market to fund the processes

DEVELOPING A NEW LEGAL CANNABIS MARKET PRESENTS AN OPPORTUNITY TO ESTABLISH A MORE EQUAL AND INCLUSIVE ECONOMIC SYSTEM WHICH WILL BENEFIT ALL OF SOCIETY

required.⁸² Missouri, for example, allocated \$7 million to expunge cannabis offences, and Illinois awarded \$1.4 million in grants to help organisations support the expungement process.⁸³ The cost of this to the UK is difficult to estimate, but there may be lessons to be taken from the pardons for historical convictions for homosexuality.⁸⁴

Developing a new legal cannabis market presents an opportunity to establish a more equal and inclusive economic system which will

benefit all of society. Legalisation gives scope to establish a new diverse market landscape of small- and medium-sized businesses, avoiding market consolidation and monopolisation (and attendant risks of corporate capture), and to encourage the economic inclusion of historically marginalised communities that can meaningfully participate in, and benefit from, a new market architecture. Social equity programmes are a key support mechanism that help ensure the success of wider economic inclusion. It is an opportunity to lower the barriers to access and offers a degree of reparation for the harms of prohibition through proactive economic inclusion as well as via reinvesting into impacted communities. These should exist to help support people setting up both non-profit associations as well as becoming involved in the commercial market.

Social equity programmes should be a priority not only because there is a responsibility to redress the harms prohibition has disproportionately inflicted on certain communities, but also because there is a significant potential benefit to economically enfranchising marginalised and impacted communities. As the Supernova Women's impact report on social equity programmes finds, there is 'financial return on investment [from] a robust cannabis equity program,' for every \$1 invested there is a projected social return of \$1.20.⁸⁵ If the benefits of community investment are considered, including expungement assistance, 'the social value generated by a social equity programme increases to \$4.56 for every \$1.'⁸⁶

SOCIAL EQUITY PROGRAMMES

Social equity programmes support the redistribution of economic power to marginalised and disproportionately impacted communities in emerging markets. This is to ensure that a legal cannabis market is not captured by large corporations and economically advantaged individuals.

Some of the key elements include:

- Proactive engagement to encourage participation of underrepresented groups in the market.
- Reducing financial barriers for equity applicants: waivers and discounts available on application fees, licensing and other fees, as well as access to capital in the form of grants or loan schemes, and funding for a range of training programmes.
- Advantages/prioritisation in the licensing process for equity applicants (including applicants from not-for-profit associations) e.g. exclusivity for equity applicants for a period of time.
- Technical assistance and wraparound benefits to help 'level the playing field' for equity candidates, including legal and accounting services and other forms of workforce development and training.
- Preventing the emergence of monopoly/oligopoly control of the market (as has happened with alcohol and tobacco) and the attendant risks of corporate capture distorting policy priorities in the interests of private profit.

LEGALISATION GIVES SCOPE TO ENCOURAGE THE ECONOMIC INCLUSION OF HISTORICALLY MARGINALISED COMMUNITIES THAT CAN MEANINGFULLY PARTICIPATE IN, AND BENEFIT FROM, A NEW MARKET ARCHITECTURE

Many US states have sought to acknowledge the disproportionate harms of cannabis prohibition through measures to facilitate market access for these communities, generally funded with tax revenue from the legal cannabis market. California allocated \$15 million to help cities and counties implement social equity initiatives at the local level, with a portion of funding going directly to licensees in the form of loans and grants and the remainder to training programmes and technical assistance.⁸⁷ Under the Oakland model, equity applicants are provided with three years of free rent and any required security.

Under this model, social equity applicants receive startup funding and space.⁸⁸ Illinois has proposed a low-interest loan scheme in disproportionately impacted areas with \$30 million of funding, as well as licence fee reductions of up to 50% for those who qualify. The Marijuana Regulatory Agency in Michigan proposed reducing licence fees by up to 60%. San Francisco has implemented waivers of \$5,000 licensing fees as well as a scheme where 'equity incubators' provide equity applicants with rent-free space or technical assistance.⁸⁹

As well as using social equity programmes to directly promote inclusion in the legalised cannabis market, they also include mechanisms for the direction of a proportion of tax revenues back into impacted communities, supporting drug service provision and wider social programmes. Illinois dedicated 25% of cannabis tax revenue to investing in impacted communities to 'address the impact of economic disinvestment, concentrated poverty, violence and the historical overuse of criminal justice responses.' New York has redirected 40% of tax revenue in this way, and in New Jersey the figure is 70%.⁹⁰

Transform is committed to learning from emerging evidence on the scope, effectiveness, and challenges of efforts to address and repair the harms experienced by racially minoritised communities under drug prohibition. We are collaborating with these communities to promote equity in a new legal UK cannabis market and strongly advise policymakers to prioritise economic reinvestment here.

DISCUSSION ON COSTS AND SAVINGS IN THE HEALTH SYSTEM

There are a range of potential health-related costs and benefits associated with different forms of cannabis use among different demographics that may be impacted by changes in policy and law. Trying to evaluate these from the Treasury perspective is a complex task.

The health-related financial costs of cannabis use include treatment costs, accident and emergency costs related to acute adverse incidents, costs of accidents caused by driving under the influence (DUI) of cannabis, and longer-term effects on health and well-being relating to potential negative impacts on mental health, relationships, employment and civic participation. Health benefits include medical benefits of non-prescribed cannabis use and related reduction in NHS costs on displacement of prescription drug costs, as well as potential displacement of more harmful drug use including alcohol and related health costs.

How policy and law reform impacts all of these depends on both the nature of any reforms and the wider policy environment in which they take place. Assessing the impact of a proposed legalisation and regulation reform, in terms of the health costs and benefits, therefore begs a series of intersecting questions:

- What will the impact of proposed cannabis regulation be on prevalence of use (particularly prevalence of higher risk use behaviours and use among vulnerable populations associated with greater health costs)?
- Independent of prevalence, are the risks associated with cannabis consumption impacted by regulation – for example, if products become safer, or safer consumption behaviours are adopted?
- How does the shift to regulation impact on other health risk behaviours - specifically use of alcohol or other drugs?
- How does the use of cannabis from non-medical supply channels intersect with use of prescribed cannabis based medical products or the use of other prescribed drugs?

Below we discuss key issues raised by these questions, some of the analysis undertaken by Bryan *et al.* on them, and some newer evidence from other reform jurisdictions. Whilst we review and discuss some relevant data and costs estimates, we have opted to not include specific monetary estimates for net financial health related impacts to the Treasury in this analysis. This is for two main reasons, firstly, and most importantly, the evidence suggests a responsible public-health oriented legal regulation model would not lead to significant changes in prevalence of use, and therefore not have major impacts on health costs or benefits. Even if prevalence were to rise, it is unlikely that any resulting increase in health costs would be significant compared with other economic costs and benefits elements in this analysis, not least because positive and negative impacts will, to some extent, cancel each other out. And secondly, the complexities, and gaps in existing knowledge regarding potential health costs and benefits are such that pinning down reliable estimates is prohibitively difficult.

Part of the challenge is that the set of proposals that Transform has made for a regulated cannabis market, that form the basis of our assumptions, have drawn on lessons, good and bad, from a range of emerging cannabis models, as well as regulation of other drugs and risky behaviours. The public health focus of Transform's proposals, unsurprisingly, has a specific policy design focus on minimising health harms. Transform's UK proposals differ in key respects from existing models in the US, making more direct inferences from health impacts of other models, where better data is available, problematic.

It is important to be clear that the suggestion that cannabis is an entirely benign drug is a nonsensical and deeply unhelpful position. Notably, however, this 'cannabis is harmless' line is more often deployed as a straw man argument from opponents of reform, rather than from serious actors in the reform debate who would never make such a claim.

There is, of course, a wide spectrum of health risks associated with all drug use, and cannabis is no exception – especially regarding higher frequency use of higher potency cannabis products by vulnerable populations – notably adolescents. These risks are further exacerbated by criminalising people who use cannabis and abdicating responsibility for its production and supply to unregulated individuals and organised crime groups.

However, it is also reasonable to note that cannabis use has a relatively lower public health burden compared to many other commonly used drugs, including alcohol and tobacco. Without underplaying the serious negative health impacts that some people experience with their cannabis use – or the importance of a policy and institutional response to address them – the estimates of health costs that we do have suggests they are relatively modest in scale compared to other economic impacts including tax revenue or CJS costs.

PREVALENCE OF USE

The most obvious potential area of health impact from legalisation and regulation – at least in policy debates historically – is the impact on prevalence of use. There has long been an assumption that legalisation and regulation will involve commercialised models that will drive consumption upwards due to increased availability, a fall in price, and alcohol and tobacco style profit-driven marketing. The assumption is then made that there will correspondingly be an increase in health harms and related cost burdens. As noted above, the models proposed by Transform are explicitly designed to mitigate such scenarios. The impact of legalisation and regulation on prevalence and health harms is, in any case, more complex than this narrow and simplistic assumption suggests.

It is also difficult to separate out impacts of policy or law changes from impacts in the wider social, cultural, political, and economic landscape that may have an impact on cannabis consumption behaviours.

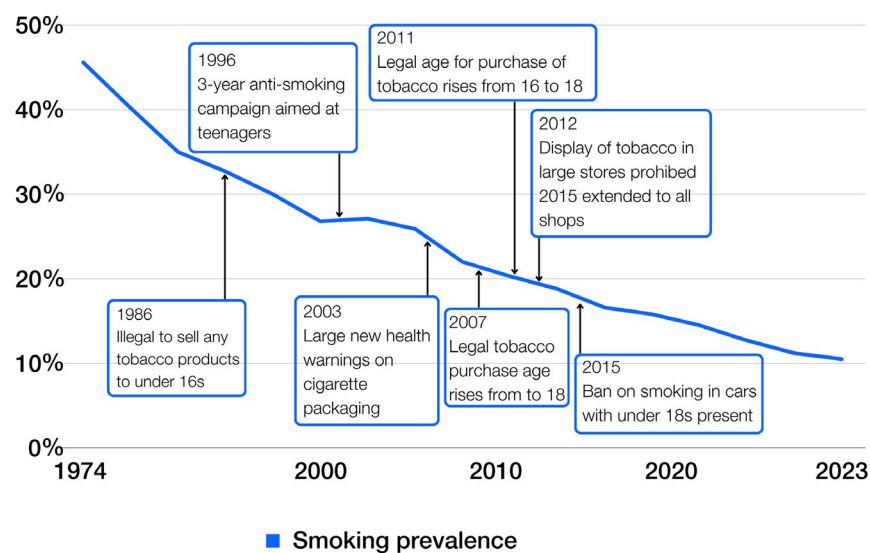
It is important to note that cannabis use has witnessed a fairly steady long-term rise in use globally and, notwithstanding shorter-term peaks and troughs, in most domestic jurisdictions as well. Crucially, this rise, both globally (excepting the few relatively recent legalisation states) and in the UK, has happened under prohibition. Indeed, the prevalence of cannabis use in the UK, from the best estimates we have, has risen by more than 500% since its prohibition under the Misuse of Drugs Act in 1971.⁹¹ Prevalence of cannabis use in the UK fell from around 2000 until 2010, seemingly untroubled by the various dramas around its legal classification under the Act, moving from B to C, then back to B. Since 2010, prevalence has witnessed marginal incremental rises most years. So the logical corollary of ‘use inevitably rises following legalisation,’ i.e. that ‘use inevitably falls under prohibition,’ is also demonstrably false.

In reality, we see the use of different legal and illegal drugs rising and falling, often in different directions at the same time, seemingly independently of their legal status or the intensity/harshness of punitive enforcement. This suggests, as with more comprehensive studies of the impacts of policy on levels of drug use, that wider socio-cultural drivers have a much bigger impact on drug using decisions than legal status and enforcement intensity.⁹² It is notable, for example, that smoking rates have fallen steadily for a number of decades thanks to better regulation and investment

in public health education. This public health win has been achieved without criminalising people who use tobacco or prohibiting sales to adults. Among young people, the (still falling) prevalence of legal tobacco use is now lower than the (still rising) prevalence of illegal cannabis.

Similarly, the proportion of young people drinking less, or not drinking at all, has risen in the last twenty years. This is likely a result of changing cultural and socio-economic factors, but again, it has notably occurred without criminalising young people for alcohol possession or prohibiting supply.⁹³

IT IS NOTABLE THAT SMOKING RATES HAVE FALLEN STEADILY FOR A NUMBER OF DECADES THANKS TO BETTER REGULATION AND INVESTMENT IN PUBLIC HEALTH EDUCATION. THIS PUBLIC HEALTH WIN HAS BEEN ACHIEVED WITHOUT CRIMINALISING PEOPLE WHO USE TOBACCO OR PROHIBITING SALES TO ADULTS



Graph 4: Smoking prevalence in the UK (16+ years-old), 1974-2023 with key policy innovations (Ash, 2024)¹⁰⁹

With regards to cannabis, reform is likely to have different effects on different demographics which are, in turn, associated with different risks. For example, legalisation in many US states and Canada seems to have been followed by small increases in overall population use. But within these totals, increases are concentrated in older adults, while adolescent use has generally remained steady or, in some cases, fallen. Similarly, in Canada, the proportion of most frequent consumers (most at risk of health harms) has also changed little post-legalisation. 6% of all Canadians reported using cannabis daily or almost daily in 2023, statistically unchanged from 5% in 2018 (when legal markets opened) and a decrease from 7% in 2022. Similarly, in 2023, 23% of Canadians reported using cannabis in the past 12 months, only a marginal change (downwards) from 25% in both 2018 and 2022.⁹⁴

These general trends, however, have also been broadly mirrored in non-legalisation states – again suggesting that wider socio-economic variables are the key drivers of consumption choices, not legal status or legal availability *per se*. As already noted, there are also widely acknowledged methodological challenges in comparing survey data before and after legalisation/decriminalisation reform. This is related to the comparative willingness of people to answer survey questions honestly about illegal or legal activities respectively.

Many of the risk factors likely to increase prevalence under assumed post-legalisation scenarios can be mitigated through responsible policy design. There is a common, but mistaken assumption, that legal cannabis markets will inevitably look a lot like legal alcohol markets. In many respects this has been the case in some legalised jurisdictions in North America – although even under the most commercialised models cannabis and its marketing are more strictly regulated than alcohol. But the similarities are far from a given. In Canada, for example, products are sold in plain packaging, with minimal branding and prominent health warnings (see p. 40), and advertising is heavily restricted. Many of the kinds of marketing we see with alcohol products, such as event/sports sponsorship, are banned entirely.⁹⁵ In some Canadian provinces, including Quebec and Nova Scotia, cannabis retailing is a provincial government monopoly, effectively removing the incentives of commercial entities to maximise sales and profits. In Uruguay, legal retail cannabis sales are of non-branded products, produced under a government monopoly, and sold from licensed pharmacies to registered adult buyers. In EU countries, including Germany and Malta, currently only personal cultivation and non-profit membership associations are permitted; there is no commercial retail market, and no marketing or branding permitted.

It is also possible for the regulatory framework to control price, either through taxation, minimum unit pricing, or direct price controls. So the assumption that prices will inevitably fall post-legalisation – driving up use – is also false. In some cases where prices have fallen considerably, such as Canada, prevalence of use has not increased

RESPONSIBLE REGULATION CAN FACILITATE PRECISELY TARGETED DELIVERY OF KEY HEALTH AND HARM REDUCTION INFORMATION DIRECTLY TO THOSE WHO NEED IT: THE CONSUMERS THEMSELVES PURCHASING THE PRODUCTS. THIS IS AN OPPORTUNITY ENTIRELY ABSENT WITH UNREGULATED ILLEGAL SALES

significantly.⁹⁶ And while prices have fallen in some legal jurisdictions in others, such as Uruguay, they are subject to government controls and have not fallen. The concept of using minimum unit pricing to moderate consumption is already familiar in the UK for alcohol.⁹⁷

There is a further, commonly made, assumption that the availability of cannabis will dramatically increase under a legal regime, and that – drawing on evidence linking availability and prevalence from the alcohol and tobacco literature – this will inevitably drive an increase in use. This

is a mistaken assumption. It firstly ignores the existing high availability of cannabis under prohibition – particularly in the social media era with the proliferation of WhatsApp/Telegram menus and home delivery services - with all the ease and convenience of Deliveroo.⁹⁸ Cannabis is already *very easy* to access, and increasingly so, for anyone who wants it. Under a legally regulated regime, government agencies make decisions about how to control availability: age access, the number and location of stores (or websites if online retailing is permitted), external signage, hours of opening, and so on. Controlled availability is not the same as increased availability – indeed the opposite may be the case. As the illegal market shrinks, availability to youth who cannot access adult only stores will also shrink; in some legal US states youth have reported *decreased* availability.⁹⁹

Evidence based prevention efforts, and risk and harm reduction education can also have impacts on both limiting initiation and moderating consumption and higher risk behaviours amongst existing consumers. Investment in such interventions is a policy choice independent of the legal status of cannabis supply. It is reasonable to propose that post-legalisation investment in such interventions would increase, supported, or at least justified, by tax revenue from the emerging legal market. This has been the case in almost all reforming jurisdictions. Engagement in such services, and their corresponding efficacy, particularly for vulnerable youth populations, will be further enabled by the change in legal status; people are more likely to engage with and trust official health information about a particular risk behaviour if the same authorities are not simultaneously threatening to arrest and punish them for engaging in it.

Taken collectively, controls on marketing, price, and availability, combined with meaningful investment in prevention and risk education have the ability to limit upward pressures on prevalence following regulation, and can potentially, if implemented well, create downward pressures. The contrasting experiences with poorly regulated alcohol markets and increasingly well-regulated tobacco markets in the UK are particularly instructive here.

On the basis that Transform’s public health-led regulation proposals include all of these elements, and taking into account the experiences of jurisdictions that have legalised and regulated cannabis, we make an assumption that the proposed change in legal status and availability will not have a significant impact on prevalence beyond wider underlying trends. This does not mean use will remain unchanged, or will never rise again - changes in prevalence, including rises, are inevitable in the medium to long term. Rather, it means that the transition from prohibition to responsibly regulated legal adult access will not inevitably drive up use and related harms, relative to the status quo.

HEALTH HARMS PER CONSUMER

The health impacts of cannabis, and any related financial costs and benefits, are impacted by the nature of the product being consumed and consumption behaviours.

Legally regulated products are intrinsically safer than illegally produced and supplied products. Quality controls and trading standards can ensure that legal cannabis products are not contaminated with heavy metals from fertilisers or fungus/bacteria from poor cultivation practices, mis-sold or adulterated with synthetic cannabinoids, or bulked up with lead or glass – all problems witnessed in illegally produced and sold cannabis products.

Legally regulated products will also have contents (THC/CBD) clearly labelled, allowing consumers to make more



Regulated cannabis packaging in Uruguay and Canada

informed decisions about their consumption. Information on contents, risks and harm reduction would be mandated on all packaging (as in Canada, for example) and available at point of sale. Vendors would additionally be subject to training requirements to enable provision of tailored health information to consumers. Responsible regulation can thus facilitate precisely targeted delivery of key health and harm reduction information directly to those who need it: the consumers themselves purchasing the products – an opportunity entirely absent with unregulated illegal sales.

Potency of cannabis has often been linked to health risks. Whilst people tend to self-titrate their dose of THC, it seems likely that use of more potent cannabis products increases total THC exposure, and correspondingly involves higher risks (in a similar pattern to consumption of stronger alcoholic beverages). While the economic dynamics of the illegal market have incentivised a long-term shift towards more potent cannabis strains, regulation can seek to moderate total THC consumption in a number of ways: through potency controls on retail products, direct-THC taxation or minimum unit pricing that disincentivise use of more potent/risky products, and through information on packaging and at point of sale linking clearly labelled potency information to health risk reduction messaging. It is the case that in some emerging legal markets cannabis product potency has increased, and that new super-potent extracts (70-80% THC and upwards) have emerged in some retail markets. These moves are not inevitable, but are the result of policy and regulatory choices that differ from Transform’s proposals.

Additionally, if different types of cannabis products are eventually made available, such as vapes and edibles, this provides safer alternatives to consumers than combustibles. In the UK and Europe, there is a higher tendency to use tobacco and cannabis together. Since regulating its cannabis market, with non-combustible products available on the market, Canada has recorded a decrease in tobacco use alongside cannabis use from 30% down to 24% over five years.¹⁰⁰ In the UK, we could potentially see some improved health outcomes in terms of smoking-associated illnesses – although it is difficult to predict how this may happen.

TREATMENT COSTS

Bryan *et al.* estimate cannabis-related treatment, based on the volume of adult cannabis treatment cases (16,000 in 2009-10), to be around 7% of the total treatment caseload. The total cost for cannabis treatment in England and Wales was approximately £44 million. They note that ‘even an increase in the cannabis market as large as 50% would only increase treatment costs by somewhere between £12m and £24m, which is small in comparison to policing and criminal justice costs.’¹⁰¹

The number of people entering treatment for cannabis in 2023 was, however, 50% higher than in 2010 at 28,800.¹⁰² Adjusting for this increase, inflation, inclusion of Scotland and Northern Ireland, and changes in cannabis use since 2010, takes the total cost - based on the Bryan *et al.* estimate, to nearer £100 million, albeit with a very large margin of error and, as Bryan *et al.* suggest, a likely overestimate of unit treatment costs. While this is not an insignificant sum, an increase in cannabis use of 10%, for example, and making the big assumptions that this increase was all due to legalisation and that treatment needs are directly proportionate to prevalence of use in the population, would

only raise total treatment costs by £10 million.

Given our assumptions that a transition to the responsible regulation models proposed would not significantly impact prevalence, and that regulated cannabis products would be safer, with consumers of regulated potency-controlled products more informed and enabled to make better decisions about their risk behaviours - we do not anticipate the proposed reforms driving an increase in demand for treatment.

The availability of treatment is, however, a policy decision. A good argument can be made that there are already unmet cannabis-related treatment needs under the status quo, and that treatment availability should be increased regardless of legal changes. Indeed, the current criminalisation of cannabis, with the accompanying stigma and potential for negative impacts on personal life, such as long-term harm to job prospects etc., may make people less willing to declare they use the drug – and have a need for treatment – than would be the case with alcohol or tobacco. Therefore, it is likely that unmet cannabis treatment issues, exacerbated by criminalisation, are manifesting in other costs to society.

Post-legalisation, an increase in spending on treatment could potentially be justified by new revenues from the emerging market. Barriers to treatment are also likely to be reduced as the stigma associated with criminality of use disappears. There may also, however, be a reduction in treatment uptake that comes from CJS referrals. It is very difficult to quantify these possible impacts that are so contingent on wider policy choices, rather than a result of legalisation *per se*.

HEALTH COSTS RELATED TO DRIVING UNDER THE INFLUENCE

Another common assumption is that the legalisation of cannabis will lead to an increase in driving under the influence (DUI) of cannabis and related automobile accidents which, in turn, will drive up direct costs to the health service. This assumption is based on a series of secondary assumptions: firstly, that legalisation would increase prevalence of use and secondly, that prevalence of DUI cannabis is directly related to prevalence of use. While both assumptions are plausible, they are by no means a given. The assumption of increasing prevalence of use is challenged above. The second assumption, that there is a direct correlation between prevalence and DUI is questionable as it ignores other external variables – most obviously DUI enforcement, public education and changing social norms.

It is important to be clear that whilst possession and use of cannabis would no longer be an offence of any kind, and that adults would have access to legally regulated cannabis supply under the proposed reform scenario, driving whilst impaired by cannabis would remain an offence subject to sanctions. Nobody advocating for the legalisation and regulation of cannabis is suggesting that driving whilst impaired by cannabis should also be legalised. Unlike consenting adult use of drugs, driving whilst impaired by drug use directly risks serious harm to others, justifying a legal state intervention.

A key reference point here is the experience with driving under the influence of alcohol. The combination of robust enforcement, new technology (safer cars and roads), and meaningful investment in public education has seen a dramatic reduction in alcohol related automobile accidents, deaths and injuries. While per capita alcohol use has fallen from a peak around 2004, up to this point it had been rising fairly steadily since the 1930s, including the period in the latter half of last century during which the fall in drink-driving and related harms was achieved. In other words, drink driving accidents were falling as per capita consumption was rising. External variables relating to effective enforcement, technology, public education and shifting social norms were far more important than prevalence or per capita consumption.

Notwithstanding the technical challenges of cannabis DUI enforcement, the response to cannabis-related driving can be informed by the experience with alcohol.¹⁰³ There is no reason that DUI cannabis (which, to repeat, will remain a sanctionable offence under any reform scenario) cannot be similarly impacted through targeted enforcement, and public education to embed social norms around its risks and unacceptability.

This is the assumption behind existing official ‘don’t use cannabis and drive’ campaigns, for example in the Republic of Ireland and Australia, where cannabis has not been legally regulated, and others like Canada where cannabis is now legal.¹⁰⁴

As with wider cannabis prevention and risk education, it is also reasonable to propose that regulation could enable a more meaningful impact on this problem by freeing up resources to support targeted enforcement and public education, and by reducing barriers to engagement from key target audiences.

Real-world studies into the links between cannabis legalisation and DUI cannabis have produced ambiguous results, potentially reflecting heterogeneity of cannabis regulation policies and policy environments even within the US, where the studies are overwhelmingly based (and different to emerging EU models and Transform’s UK proposals). That said, the studies have tended to show a small but statistically significant overall increase in fatal crashes post-legalisation. There are also acknowledged methodological challenges in such evaluations. Testing and impairment technology evolves over time, and sampling methodologies can vary before and after any legal/market reforms. But even if drawing conclusions about causality is difficult from these studies (DUI cannabis-related accidents have been rising generally, including in non-legalisation jurisdictions) they certainly demand that mitigating risks of DUI cannabis remains a priority in policy design under any legal scenario.

HEALTH BENEFITS

Some commentators have suggested that legalisation of cannabis could have a significant positive impact on the NHS bill by reducing the treatment and prescription drug budget for a range of conditions. For example, a report by Ramanauskas in 2018 (for the TaxPayers’ Alliance), loosely based on inferences from selected US studies, speculates that legalisation of cannabis could save the NHS £132 million a year in pain medication prescriptions (a 30% decrease), £78 million a year on antidepressant prescriptions, £43 million a year on sleeping pill prescriptions, and £21 million a year on anti-anxiety medication prescriptions.¹⁰⁵ These, admittedly rough, estimates are problematic for a number of reasons. They conflate issues around provision of Cannabis-Based Medical Products (CBMPs), which should take place within a formal medical framework (and would not be without costs to the NHS), with self-medication using non-medical retail supply, something public health advocates would not endorse for potentially serious medical conditions. They also ignore the fact that many people are, for better or worse, already self-medicating with illegal cannabis, and any increased benefits from a move to legal retail are likely to be marginal.

It may well be the case that if the much-heralded treatment potential of CBMPs is further borne out by clinical evidence, and realised within mainstream medicine, that many people who would be potential customers from a non-medical market, legal or illegal, will in fact switch to a prescribed medical supply. But whilst there are potentially very significant savings for the NHS in prescription and treatment budgets flowing from greater availability of CBMPs (whether prescribed or informally supplied), quantifying these is almost impossible at this stage given the underdeveloped nature of the research evidence in key areas, and unknowns around the future intersection of medical and non-medical provision.

A further health benefit of legalisation that is often proposed is the potential of cannabis use to displace alcohol use. Given the relative risk profiles and public health burdens, there is a potentially significant net public health benefit of such displacement from reduced alcohol use and related health harms/costs. To provide some perspective on this, the Institute of Alcohol Studies has estimated the cost of alcohol harms in the UK to be between £35 and £39 billion annually (this includes costs to the NHS, Social Services, the wider economy, and crime and disorder – so is not a direct Treasury cost/benefit impact figure).¹⁰⁶

The evidence relating to the ability of cannabis to displace alcohol use is, however, quite ambiguous, particularly when attempts are made to link it directly to legalisation and regulation. While there is some indication of a displacement effect in some jurisdictions there is evidence of a complementary effect in others (i.e. increased cannabis use is associated with increased alcohol use). Notably reviews in the US, where again most of the research

is based, have tended to find an association between non-medical stores opening and an increase in alcohol consumption, albeit generally small and not always statistically significant.¹⁰⁷ Any impacts are also likely to vary between different drinking behaviours, demographics and sub-populations, complicating the picture further – the research on impacts of binge drinking, for example, is more ambiguous.¹⁰⁸

Displacement from use of alcohol to cannabis can also occur with illegal cannabis supplies. Legalisation of cannabis may facilitate displacement, but it is not a necessary condition. The extent of any positive displacement effect will also be dependent on the nature of the alcohol and cannabis culture in a given jurisdiction, the regulation model adopted – including potential changes to, and intersections with, alcohol regulation models, and related public health education on relative risks.

While there are potentially very significant impacts from a cannabis/alcohol displacement effect, something certainly acknowledged by Bryan *et al.* and many other commentators, the evidence at present does not allow any way to meaningfully quantify it, or the size of the impact of legalisation specifically, in releasing such benefits.

CONCLUSION

The findings of this report underscore the significant economic advantages of legalising and regulating cannabis in the UK. With an estimated illegal market worth over £2 billion annually, transitioning to a legally regulated framework presents a unique opportunity to generate substantial government revenue, create jobs, and reduce public expenditure on law enforcement and criminal justice. The Hybrid Commercial Retail and State Monopoly Retail models offer projected annual tax revenues between £800 million and £1.1 billion; even the more limited Home-Grow and Non-Profit Associations model could be expected to bring over £250 million in new government income.



Beyond direct revenue, legalisation will drive considerable savings within the Criminal Justice System, with reduced policing, prosecution, court proceedings, and prisons costs potentially saving over £280 million annually. Furthermore, legalisation provides the opportunity to mitigate the long-term economic damage caused by criminal records, which disproportionately impact marginalised communities and restrict employment opportunities.

While the economic case for cannabis reform is compelling, financial incentives should not overshadow broader considerations of promoting equity and social justice, protecting public health, reducing cannabis-related crime, increasing youth safety, personal liberties, and environmental sustainability. Redirecting revenue from cannabis

WITH AN ESTIMATED ILLEGAL MARKET WORTH OVER £2 BILLION ANNUALLY, TRANSITIONING TO A LEGALLY REGULATED FRAMEWORK PRESENTS A UNIQUE OPPORTUNITY TO GENERATE SUBSTANTIAL GOVERNMENT REVENUE, CREATE JOBS, AND REDUCE PUBLIC EXPENDITURE ON LAW ENFORCEMENT AND CRIMINAL JUSTICE

taxation towards harm reduction, prevention, and treatment services, as well as reinvesting in communities disproportionately affected by prohibition are essential goals of a legalisation process.

With growing public support and shifting global trends away from prohibition towards legally regulated cannabis markets, the UK is approaching an inflection point where maintaining the failing status quo is becoming increasingly untenable. By embracing a responsibly regulated cannabis market, the UK has the potential to deliver meaningful social change as well as bring substantial revenue and cost-savings to the Government and the taxpayer.

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