

The Economic and Social Benefits and Costs of Legalising Recreational Cannabis in Queensland: A preliminary examination

MICRO REPORT

December 2016



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Bluegreen Economics [BGE] is a social economics consultancy. We take a unique approach to understanding and analysing contemporary and emerging social issues by applying both economic and social thinking through our multi-disciplinary team which has qualifications and experience in a broad range of social science disciplines.

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Executive Summary

Cannabis has been consumed in Queensland in large amounts for many decades. However, consuming cannabis for recreational purposes is currently illegal. Queensland has the highest number of cannabis related arrests of any Australian state or territory, including for the past 15 years, with 23,850 arrests made in 2014-15. This puts it at odds with US states like Colorado where consumers have been able to purchase recreational cannabis products from licenced premises operating in a regulated and taxed market environment since January 2014.

An increasing number of countries and states are taking a more health-focused and less justice-focused approach to cannabis regulation on the back of the well documented failed 'war on drugs' by either decriminalising recreational cannabis use or legalising it by adopting 'regulate and tax' schemes. This approach recognises that cannabis is a commonly used drug with a broad level of acceptance in many communities. The United Nations World Drug Report estimates that in 2013 there were 181.8 million users of cannabis worldwide, with the usage rate in North America for those aged 15 to 64 being 11.6 per cent with a similar level of 10.7 per cent for the Oceania region (Australia/New Zealand). Queensland has a usage rate of around 11 per cent for persons aged 14 and over which despite the increasingly high number of arrests since 2001 has not declined.

We undertook a preliminary examination of the main, likely economic and social benefits and costs of a Queensland recreational cannabis market (QRCM) by using data collected by government agencies as well as drawing on data from the Colorado Department of Revenue. We find that both the state government and cannabis consumers would realise a significant net benefit under a regulated and taxed recreational cannabis scheme.

For government, there is likely to be increased tax and fee revenue of around \$90 million/year in the medium term (three to five years) and significant savings in terms of decreased police, court and prison costs. The economy is likely to benefit from a new cannabis industry, depending on the particular regulate and tax model adopted, with new jobs created. These benefits would offset some additional costs to government in terms of the establishment and ongoing administration and compliance of the scheme, as well as a likely small increase in mental and physical health costs associated with new consumers or existing consumers who increase their usage. These additional health costs could be mitigated by a public education campaign.

For consumers, once purchasing cannabis on the black market and at risk of being fined and imprisoned with the associated police record and social stigma limiting their future job prospects, significant benefits would be realised by purchasing from licenced premises. They would also benefit in terms of product safety and in some cases lower transaction costs by conveniently purchasing from local businesses. Importantly, they are also likely to realise a financial benefit via a consumer surplus as the scheme matured and the price of cannabis decreased to below the black-market price in a competitive environment.

A detailed benefit-cost analysis would be required to place an exact dollar amount on the expected net benefits to the government, consumers and, more generally, society.

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Introduction

Cannabis has been consumed in Queensland in large amounts for many decades. However, consuming cannabis for recreational purposes is currently illegal. Queensland has the highest number of cannabis related arrests of any Australian state or territory, including for the past 15 years, with 23,850 arrests made in 2014-15¹. This puts it at odds with US states like Colorado where consumers have been able to purchase recreational cannabis products from licenced premises operating in a regulated and taxed market environment since January 2014.

An increasing number of countries and states are taking a more health-focused and less justice-focused approach to cannabis regulation on the back of the well documented failed 'war on drugs' by either decriminalising recreational cannabis use or legalising it by adopting 'regulate and tax' schemes. This approach recognises that cannabis is a commonly used drug with a broad level of acceptance in many communities. In some jurisdictions, like South Australia, consuming cannabis is decriminalised for smaller quantities for personal use where fines are issued instead of consumers being charged and having to negotiate the court system. This is also less costly and raises a small amount of revenue for government coffers. However, governments forgo tax and fee revenue under a decriminalised model.

For the consumer, this is also less costly in terms of time in front of the courts and away from work. Importantly, it also means no criminal record. However, consumers still purchase cannabis on the black-market which comes with risks associated with product safety around things like potency variations and sometimes significant price variations due to supply and locational factors.

We undertake a preliminary examination of the main, likely economic and social benefits and costs of a Queensland recreational cannabis market (QRCM) by using data collected by government agencies as well as drawing on data from the Colorado Department of Revenue. Recreational cannabis has been legally sold and consumed in that state since January 2014. First, we provide an overview of the international trend toward legalising recreational cannabis including a brief description of the regulate and tax model used in Colorado. We then take a look at the current situation in Queensland and identify the likely economic and social benefits and costs for the government, consumers and, more generally, society.

The reasons for the focus on cannabis to the exclusion of other prohibited drugs like cocaine, heroin and amphetamines is three-fold. First, cannabis is currently the most widely used recreational drug in Australia, including Queensland. Second, cannabis arrests in Queensland are the highest in Australia. Third, the US state of Colorado, which made recreational cannabis use legal in 2012 and commenced operations in January 2014, provides a useful case study with its similar population size (Queensland, 4.8M; Colorado, 5.5M) and culture given Australia and the United States are considered part of the Anglosphere and where 'policy transfer' between these countries is common. Interestingly, both states were created within 17 years of each other (Queensland, 1859; Colorado, 1876).

¹ Australian Crime Intelligence Commission (2016) *Illicit Drug Data Report 2014-15*

The International Trend Toward Legalising Recreational Cannabis

Cannabis is the world's most popular illicit drug. The United Nations World Drug Report estimates that in 2013 there were 181.8 million users of cannabis worldwide with the usage rate in North America for people aged 15 to 64 being 11.6 per cent and 10.7 per cent for those in the Oceania region (Australia/New Zealand). However, this is a 'best estimate' and the prevalence range for Oceania is nine per cent to 14.5 per cent with as many as 3.57 million people using this drug². This is despite the decades long 'war on drugs'.

In Australia, the most recent Australian Institute of Health and Welfare's survey report on drug use confirms the United Nations figure of around one in every 10 people, showing that 10.2 per cent of people aged 14 or older used cannabis in 2013 with approximately one-third (35%) having used cannabis in their lifetime³.

While many countries continue to operate under punitive, justice-focused models, including in some countries where the death penalty may be applied, there is a trend or movement toward decriminalisation, and in some cases the legalisation, of cannabis.

According to the Global Commission on Drug Policy, 'States must eventually explore regulatory models for all illicit drugs and acknowledge this to be the logical next step in drug policy reform following decriminalization'⁴. The GCDP was established in 2011 as an international organisation dedicated to informed, science-based discussions about humane and effective ways to reduce the harm caused by drugs to people and societies⁵. It has 23 Commissioners including the former Secretary General of the United Nations, Kofi Annan, the former Presidents of Brazil, Switzerland, Colombia, Poland, Chile, Nigeria, Portugal and Mexico, as well as other notable people like Paul Volcker, former Chairman of the US Federal Reserve, Nick Clegg, former UK Deputy Prime Minister, and entrepreneur Sir Richard Branson.

However, the aims and purpose of the GCDP, in broad terms, is at odds with the United Nations Office on Drugs and Crime (UNODC) which is 'mandated to assist Member States in their struggle against illicit drugs, crime and terrorism'⁶. This creates tensions both internationally and nationally, within countries like the US, between the historical justice-focused approach to understanding drug use and the more recent progressive, health-focused approach. This is criminalisation versus decriminalisation/legalisation, which is well documented in the public arena.

² United Nations Office on Drugs and Crime (UNODC), *World Drug Report 2015*, (United Nations publication, Sales No. E.15.XI.6).

³ AIHW 2014. *National Drug Strategy Household Survey detailed report 2013*. Drug statistics series no. 28. Cat. no. PHE 183. Canberra: AIHW.

⁴ Global Commission on Drug Policy (GCDP) 2016. *Advancing Drug Policy Reform: A new approach to decriminalisation*. 2016 Report.

⁵ Global Commission on Drug Policy (GCDP) 2016. *About Us*. <http://www.globalcommissionondrugs.org/about-us> Accessed 27 November 2016

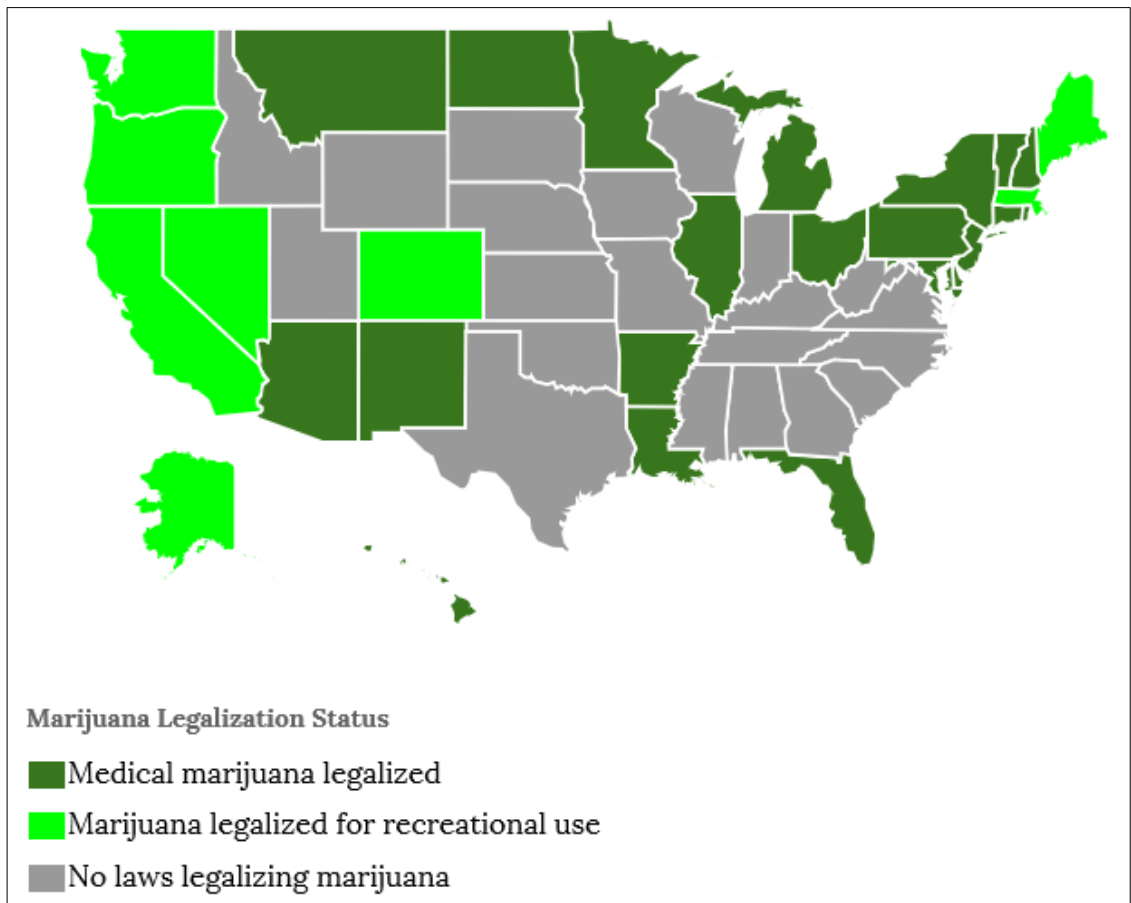
⁶ UNODC 2016. 'About UNODC', <http://www.unodc.org/unodc/en/about-unodc/index.html?ref=menutop> Accessed 27 November 2016

It should be noted that there are differences of opinion in the more progressive camp on whether decriminalisation or legalisation is the best approach to addressing recreational cannabis use.

Understanding the complex jurisdictional differences in cannabis law around the world is a major project in itself and is outside the scope of this report. However, there are a number of jurisdictions regularly cited for their quite successful transition from prohibition to regulated legalisation, of which Uruguay is one. Notable others, and arguably more relevant to Queensland, are the US states of Alaska, Colorado, Oregon and Washington State which have been legalised for the past few years.

Last month, in November 2016, the states of California, Maine, Massachusetts and Nevada, by citizen vote, agreed to also legalise recreational cannabis although the formal legal process in some of these states is yet to be taken.

Figure 1: US states where recreational cannabis is now or soon to be legalised



Source: *Governing*⁷

⁷ *Governing* 2016. *State Marijuana Laws in 2016 Map* <http://www.governing.com/gov-data/state-marijuana-laws-map-medical-recreational.html> Accessed 4 December 2016

The Colorado Experience

The US state of Colorado in 2012 voted to legalise the recreational use of cannabis. A Task Force was created in December 2012 to:

*identify the legal, policy and procedural issues that need to be resolved, and to offer suggestions and proposals for legislative, regulatory and executive actions that need to be taken, for the effective and efficient implementation of Amendment 64 - the constitutional amendment authorizing the use and regulation of marijuana in the State of Colorado*⁸.

One of the recommendations of the Task Force was that a state-run, rather than state regulated, model be rejected.

Commercial sales commenced in January 2014. In terms of operations, Colorado established a Marijuana Enforcement Division (MED) within the Department of Revenue which performs the regulatory day-to-day functions of the sale of cannabis. Applicants for the various licence types e.g. cultivation, retail, testing, must meet strict criteria and sign documents to that effect including for retailers to adhere to relevant state laws and regulations, product labelling and packaging, surveillance and security of premises, and record keeping. Cannabis retail applicants (for recreational use) are required to pay a number of application and licence fees depending on the size of operation and whether they will be selling medical cannabis or cannabis for personal use, and a range of other factors⁹.

In regard to driving, Colorado has established an impairment level, similar to that for alcohol. Drivers with 5 nanograms of delta-9 tetrahydrocannabinol (THC) per millilitre of whole blood can be prosecuted for driving under the influence of cannabis¹⁰.

Total cannabis tax revenue includes the 2.9 per cent retail and medical marijuana sales tax, 10 per cent retail marijuana special sales tax, 15 per cent marijuana excise tax, and retail/medical marijuana application and licence fees¹¹. Table 1 shows the tax/fee take for the last two full financial years and the year to date amount for the current financial year since recreational cannabis was legalised.

The data shows that the current financial year (sales to October 2016) is on track to bring in over \$200 million in tax/fee revenue for the government, it being noted that this is gross revenue and that there will be associated administration and compliance costs.

⁸ State of Colorado 2013. 'Task Force Report on the Implementation of Amendment 64: Regulation of marijuana in Colorado'. March 13, 2013

⁹ Colorado Department of Revenue 2016. 'Marijuana Enforcement'. <https://www.colorado.gov/pacific/enforcement/marijuanaenforcement> Accessed 2 December 2016

¹⁰ Colorado Government 2016. *Driving and traveling*. <https://www.colorado.gov/pacific/marijuana/driving-and-traveling> Accessed 2 December 2016

¹¹ Colorado Department of Revenue (2016) *Marijuana Tax Data* <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data> Accessed 19 November 2016

Table 1: Colorado State Revenue (2014-15; 2015-16; 2016-17 YTD)

	2016-17 (YTD)	2015-16	2014-15
Sales tax (2.9%)	\$11,584,554	\$19,410,953	\$11,816,410
Special sales tax (10.0%)	\$40,870,911	\$67,094,524	\$42,017,798
Excise tax (15%)	\$28,440,621	\$42,630,839	\$23,995,775
Licences & fees	\$1,816,399	\$5,263,010	\$4,545,830
Total	\$82,712,485	\$134,399,326	\$82,375,813

Source: BGE, compiled from Colorado Dept. of Revenue data

While the tax revenue is good news for Colorado, a number of unknowns have been identified given that the sale and consumption of recreational cannabis has only been in operation for just on three years. These unknowns include: how much the price of cannabis will decrease over time as the market matures; how quickly and completely commercial sales will displace the black market; what the smoked/edibles/concentrates mix will look like in the future; consumer habits and use; effects on other drugs; effects on minors; and effects on health and education¹². Some of this research is currently being undertaken. For example, the government recently conducted a 'Cannabis Users Survey on Health' or CUSH, with the report expected in 2017.

Recreational Cannabis Use in Queensland

The Status Quo

Cannabis has been consumed in Queensland in large amounts for many decades. However, consuming cannabis for recreational purposes in Queensland is currently illegal. The exception now is for medicinal purposes to treat conditions such as epilepsy, Multiple Sclerosis, and cancer side-effects, where conventional treatments have proved unsuccessful. The legislation passed parliament in October with the Public Health (Medicinal Cannabis) Act 2016 to start on 1 March 2017. Changes to the existing drugs and poisons legislation means doctors are allowed to prescribe cannabis now, subject to strict criteria¹³.

Medicinal cannabis regimes have also been introduced, or are being considered, in all other states and territories following the recent federal government's amendments to the Narcotics Drug Act which permits legally grown cannabis in Australia for medicinal use¹⁴. It is important to note that people in Queensland, unlike in some other jurisdictions, can only use a lawfully obtained medicinal cannabis product and police do not have the discretion not to prosecute someone found in possession of cannabis and using it for medical reasons¹⁵.

¹² Kleiman, Mark, A.R. 2016. *Legal Commercial Cannabis Sales in Colorado and Washington: What can we learn?* Improving Global Drug Policy: Comparative Perspectives and UNGASS 2016. Brookings Institution

¹³ Queensland Health (2016) *Public Health (Medicinal Cannabis) Act 2016* <https://www.health.qld.gov.au/system-governance/legislation/reviews/medicinal-cannabis/default.asp> Accessed 13 November 2016

¹⁴ Simon Thomsen, 'Medical marijuana is now legal in Australia'. *Business Insider Australia*, 24 February 2016. <http://www.businessinsider.com.au/medical-marijuana-is-now-legal-in-australia-2016-2>

¹⁵ Queensland Health (2016) Medicinal cannabis in Queensland <https://www.health.qld.gov.au/public-health/topics/medicinal-cannabis/overview/default.asp> Accessed 13 November 2016

Queensland also has a small scale industrial cannabis industry where cannabis fibre and seed from cannabis plants are specifically bred to have tetrahydrocannabinol (THC) levels of no more than one per cent, the component that gives users a 'high'. A licence is required to commercially produce industrial cannabis fibre and seed or conduct research into the use of such cannabis¹⁶.

Illicit drugs in Queensland are currently categorised as follows with more serious penalties applying to Schedule 1 drugs¹⁷:

- Schedule 1, Part 1 drugs – including heroin, cocaine, 'ice', LSD, 'ecstasy'
- Schedule 1, Part 2 drugs – all anabolic and androgenic steroidal agents
- Schedule 2 drugs – including **cannabis**, morphine, pethidine, ketamine

However, the Queensland Government is considering folding the Schedule 2 drugs that includes cannabis into the higher Schedule 1 as per Recommendation 3.4 of the Commission of Enquiry into Organised Crime in Queensland which finalised its report in October 2015¹⁸. This would take an opposing path to that now taken in the largest US state, California, a state that is well known for setting a progressive course which many Western countries follow soon after.

Police currently have a limited discretionary power to divert a person found in possession of a small quantity of cannabis for personal use and who meet certain criteria. The Police Drug Diversion Program (PDDP) is a Queensland Illicit Drug Diversion Initiative (QIDDI) funded by the Commonwealth's National Drug Strategy which enables police to offer a cannabis consumer the opportunity to receive professional early intervention help to address their drug use, it being acknowledged that most drug offences in Queensland involve possession of small amounts of cannabis and that a court appearance without appropriate health interventions has not been successful in reducing cannabis use or drug related offences¹⁹. It is only offered once and is typically a single 2-hour session with an approved Queensland Health Drug Diversion Assessment Program (DDAP) professional²⁰.

Unlike in Colorado, where there is an established THC level for driving, Queensland police only test for presence of THC, not impairment, under a zero-tolerance approach. At the lower end of the scale a successful charge of driving with cannabis present in a person's system may see a magistrate disqualify a person from driving for one to nine months, impose a fine up to \$1,706, or impose a prison term up to three months. At the higher end, a repeat drug driving conviction in the last five years can see a person disqualified from driving for up to two years, fined up to \$7314, or imprisoned for a term determined by the court²¹.

¹⁶ Queensland Government 2016. *Industrial Cannabis Production*. <https://www.business.qld.gov.au/industry/agriculture/niche-industries/industrial-cannabis-production> Accessed 27 November 2016

¹⁷ Legal Aid Queensland 2016 *Drugs and breaking the law* <http://www.legalaid.qld.gov.au/Find-legal-information/Criminal-justice/Offences/Drugs-and-breaking-the-law> Accessed 2 December 2016

¹⁸ Queensland Government 2015. *Queensland Organised Crime Commission of Enquiry* http://www.organisedcrimeinquiry.qld.gov.au/_data/assets/pdf_file/0017/935/QOCCI15287-ORGANISED-CRIME-INQUIRY_Final_Report.pdf Accessed 14 November 2016

¹⁹ Queensland Police Service (2016) *Police Drug Diversion Program* <https://www.police.qld.gov.au/programs/drugs/pddp/> Accessed 13 November 2016

²⁰ Queensland Police Service (2016) *Queensland Illicit Drug Diversion Initiative: What do I need to know about the Police Drug Diversion Program* https://www.police.qld.gov.au/programs/drugs/pddp/Documents/pdp_offender.pdf Accessed 13 November 2016

²¹ Queensland Government 2016. *Drugs and driving*. <https://www.qld.gov.au/transport/safety/road-safety/drink-driving/drugs/> Accessed 2 December 2016

While cannabis for recreational use has not been legalised in any Australian state or territory, a number of states and territories have decriminalised cannabis for small, personal use where consumers are given a fine similar to a parking ticket instead of being charged and having to go to court. Variations of such schemes operate in South Australia (Cannabis Expiation Notices, CENs), the ACT, and the Northern Territory.

The most recent 2013 data from the Australian Institute of Health and Welfare shows Queensland has a cannabis usage of 11.1 per cent which is slightly above the national average (10.2%) and has remained reasonably constant this century (Table 2). Table 3 shows the usage by age cohort in 2013.

Table 2: Cannabis Use (Age 14+) Last 12 Mths 1998 to 2013 (%), Selected States/National

State/territory	1998	2001	2004	2007	2010	2013
NSW	16.7	11.9	10.7	8.0	9.3	9.5
Vic	17.8	11.8	9.8	8.8	9.4	9.1
Qld	17.5	12.7	12.1	9.5	11.0	11.1
SA	17.6	14.2	11.7	10.2	11.3	11.0
National	17.9	12.9	11.3	9.1	10.3	10.2

Source: BGE, compiled from AIHW²²

Table 3: Cannabis Use (Aged 14+) by Age, 2013, Queensland & National

	14-19	20-29	30-39	40-49	50-59	60+
Qld	14.7	21.6	14.0	12.0	8.1	0.7
National	14.7	20.8	12.3	9.5	7.3	1.2

Source: BGE, compiled from AIHW²³

Cannabis arrests in Queensland are by far the highest in Australia and have been since 2001-02. As Figure 2 shows, Queensland police arrested nearly as many people last year as NSW and Victoria in total despite having around one-third of their combined population. To put this into context in regard to population size, for 2014-15 there were 23,850 cannabis arrests in Queensland of a total population of approximately 4.78 million²⁴ resulting in one arrest for every 200 people. This is compared to NSW which has one arrest for every 453 people (7.62M pop., 16,795 arrests) and Victoria's one arrest for every 577 people (5.94M pop., 10,292 arrests).

Of course, each state will have a slightly different age mix and this data takes into account the entire population, including the very young and seniors. Further, not all arrests made in a state or territory jurisdiction will be residents of that jurisdiction e.g. visitors.

²² AIHW 2014. *National Drug Strategy Household Survey detailed report: 2013*. Drug statistics series no. 28. Cat. no. PHE 183. Canberra: AIHW.

²³ Ibid.

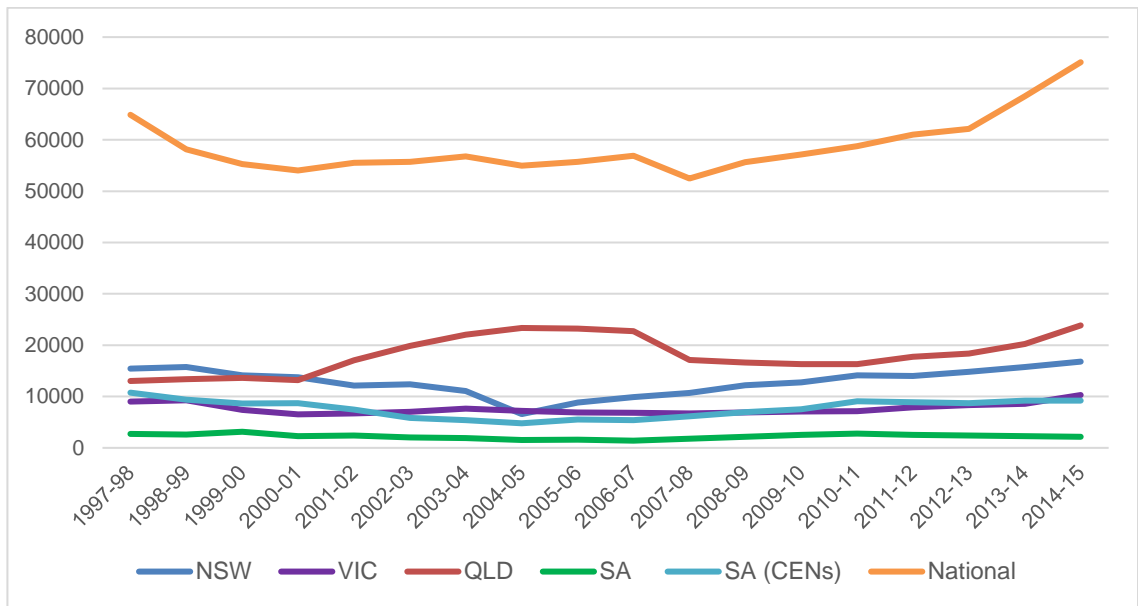
²⁴ ABS 3101.0 – *Australian Demographic Statistics, June 2015*

<http://abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6CBA90A25BAC951DCA257F7F001CC559?opendocument>
Accessed 20 November 2016

Figure 2 also shows that cannabis arrests in South Australia for non-CEN offenses have remained steady for the past 18 years at 2000 to 3000 arrests however police CEN cannabis interventions, where a fine is issued for a minor cannabis offence, have noticeably increased in the last five years.

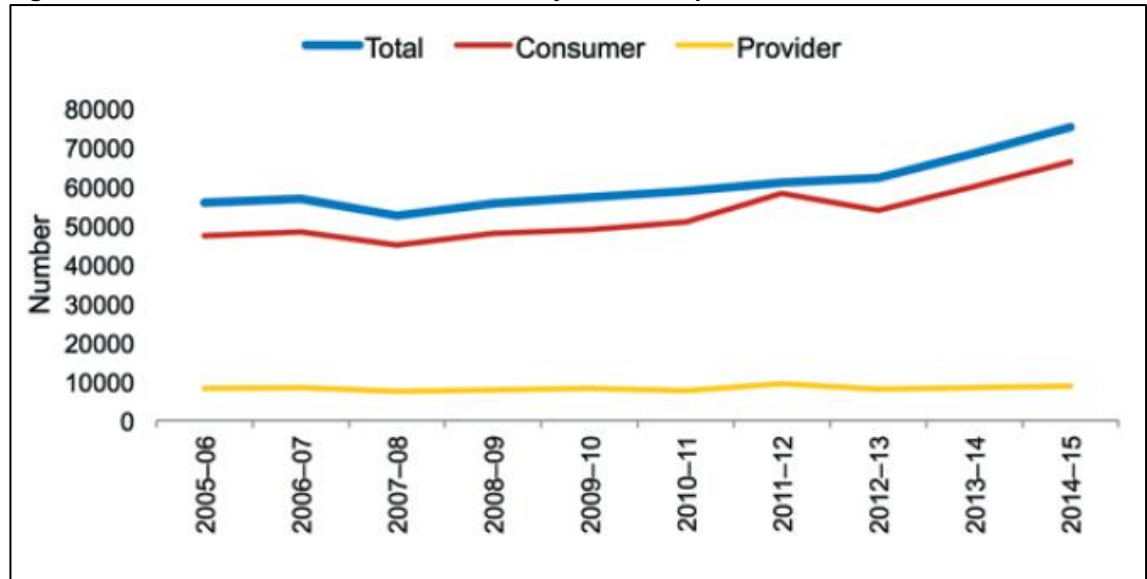
Between 2001 and 2013, despite the proportion of Queenslanders using cannabis remaining fairly constant, Queensland significantly increased its cannabis arrests to the highest number of arrests of any Australian state or territory. At a national level this has been largely due to increased ‘consumer’ arrests. ‘Producer’ arrests have remained constant for the past 10 years (see Figure 3).

Figure 2: Number of cannabis arrests 1997-98 to 2014-15, selected states & national total



Source: BGE, compiled from Australian Crime Intelligence Commission annual Illicit Drug Data reports
 Note – Arrest data includes Australian Federal Police; SA & SA (CENs) two separate data

Figure 3: Number of national cannabis arrests by consumer/provider 2005-06 to 2014-15



Source: Australian Crime Intelligence Commission Illicit Drug Data 2014-15 report

Despite all of this, the latest Queensland Crime and Corruption Commission (CCC) intelligence assessment report on illicit drugs states that ‘cannabis use is entrenched not only in Queensland society, but across Australia and the world’²⁵. The CCC’s market assessment of cannabis in the state is ‘HIGH with a stable market trend’ with an organised crime presence and with organised crime groups ‘increasingly using the services of professional facilitators, including real estate agents and electricians, in establishing grow house facilities’. While the majority of cannabis produced is ‘bush’ cannabis and most hydroponic cannabis comes into the state from South Australia and Victoria, there is an increasing number of ‘grow houses’ in all areas of the state²⁶.

Nationally, cannabis prices remained stable in 2014–15²⁷ with prices for Queensland being:

Table 4: Queensland Cannabis Prices 2014-15 (\$)

	Bush		Hydroponic			
	<i>Leaf</i>	<i>Head</i>	<i>Leaf</i>	<i>Head</i>	<i>Resin</i>	<i>Oil</i>
Deal (1 gram approx.)	15-25	15-25	15-25	25-50	25-50	50 cap/vial
¼ bag (7 grams)	n/a	50-90	n/a	n/a	-	-
½ bag (14 grams)	n/a	n/a	n/a	n/a	-	-
Ounce bag (28 grams)	200	130-280	n/a	300-450	-	-
1 pound	n/a	2200-4000	n/a	2800-5000	-	-
1 kilogram	n/a	n/a	n/a	6000	-	-
1 mature plant	n/a	2500	n/a	3200-5000	-	-

Source: Adapted from the Australian Crime Intelligence Commission, Illicit Drug Data Report 2014-15

Benefits and Costs of a ‘Regulate and Tax’ Queensland Recreational Cannabis Market

Using the Colorado model as a guide, current Queensland cannabis use data, and making some reasonable assumptions, a preliminary examination can be made of what the main, likely economic and social benefits and costs of a ‘regulate and tax’ QRCM might be.

Although cannabis decriminalisation is not the subject of this report, the conclusions of the National Drug & Alcohol Research Centre (NDARC)²⁸ have important implications for a QRCM given that one of the aims of legalising cannabis for recreational use is to take a more health-focused and less justice-focused approach. NDARC’s research evidence indicates that decriminalisation of cannabis for recreational use:

²⁵ Crime and Corruption Commission Queensland (2016) *Illicit drug markets in Queensland: 2015-16 intelligence assessment*. Queensland Government 2016

²⁶ *Ibid.*

²⁷ Australian Crime Intelligence Commission (2016) *Illicit Drug Data Report 2014-15*

²⁸ National Drug & Alcohol Research Centre (NDARC) 2016. *Decriminalisation of drug use and possession in Australia – A briefing note*. February 2016

- Reduces the costs to society, especially the criminal justice system costs
- Reduces social costs to individuals, including improving employment prospects
- Does not increase drug use
- Does not increase other crime
- May, in some forms, increase the numbers of people who have contact with the criminal justice system (net widening)

While there are some key differences between cannabis decriminalisation and cannabis legalisation, points 1, 2 and 4 are almost certain to apply to a QRCM. Point 3 ('does not increase drug use') is likely not to apply as it is expected that there will be some increase in cannabis usage in a QRCM. Point 5 ('may, in some forms, increase the numbers of people who have contact with the criminal justice system (net widening)') is also likely to not apply to a QRCM as consumers are more likely to purchase cannabis products from licenced premises, depending on the model implemented and level of taxation applied which will help determine the 'counter price'.

There are a few unknowns, some of which have been identified previously. One of the main unknowns is to what extent would a QRCM attract new consumers and increase cannabis consumption by existing consumers from the current level? While this would need to be answered by further, primary research, we already know from the data that around one in every ten Queenslanders consumes cannabis each year. Any harms to existing consumers, who are likely to be the bulk of those purchasing cannabis under a QRCM, are already happening, except for potentially any harms associated with the introduction of edibles to the market e.g. availability to minors who might otherwise not smoke cannabis, if that were to be part of a future Queensland recreational cannabis model. Edibles however may also have positive effects e.g. decreasing the incidence of respiratory disease in regard to the smoking of cannabis.

The Colorado health survey, previously mentioned, should provide some answers in this regard.

Any potential harms must of course be set against the potential benefits in order to have any meaningful understanding of the issue. Acknowledging that further research and modelling would need to be undertaken to more accurately calculate the economic and social benefits and costs of a QRCM, we make the following assumptions and identify the areas we do not consider in our analysis.

Assumptions

- No other state in Australia legalises cannabis - making comparisons with Colorado based on similar population takes into account residents of neighbouring states not having access to legalised recreational cannabis²⁹.
- The costs associated with current arrests (largely police, courts, and prisons) outweigh the current revenue from fines, etc. This is highly likely to be the case.

²⁹ it is noted that Colorado will have a not insignificant tourist cannabis consumption from neighbouring states which could be expected to decrease somewhat given California and Nevada's recent decision to legalise recreational cannabis.

- The price of cannabis in the medium to longer term falls below the current black market price as the QRCM matures³⁰.
- 15 per cent of Queenslanders (approximately 750,000 people) consume recreational cannabis with the average spend being \$1000/year, being the equivalent of approximately 1 gram per week (based on single 'deals', not bulk purchase) generating annual sales of \$750 million (at 11% cannabis tax/fees³¹)³². Note - the pricing and demand for edibles is unclear without further research.
- 10 per cent of tourists (approximately 856,000 people) consume recreational cannabis with an average spend of \$100/year (5 grams or 'deals') generating annual sales of approximately \$85.6 million. Domestic Tourists (interstate holiday, VFR, business = 6.083M³³) International tourists (holiday, VFR, business = 2.481M³⁴).

Applying the assumptions detailed above, Table 5 sets out the main, likely economic and social benefits and costs of a QRCM. The table deliberately is formulated not to assign a monetary value to each line item, given this report is a preliminary examination.

Some line items require quite detailed work to calculate the dollar benefit/cost, for example, police time for an average cannabis arrest or, more specifically, for different categories of arrest like 'simple arrest', 'involved arrest'. For other items, like Corrective Services, the breakdown of cannabis arrests resulting in prison time would need to be obtained and analysed. Likewise for 'Courts'. Every line item would require deeper investigation.

Issues Not Considered

A thorough investigation should include the following areas:

- Federal tax implications (GST, etc.)
- Federal laws and agreements with state/territories
- United Nations conventions
- Impacts on domestic violence
- Impacts on self-harm
- Impacts on workplace health and safety
- Substitute or complement effects with other drugs e.g. alcohol, tobacco, opioids

³⁰ In the short term the price may be similar to the current black market price whereby the incentives to purchase through the new regulated market would largely be down to confidence of purchasing a legal product, convenience, and product safety. The 2014-15 price of a 'deal' (1 gram) is \$15-\$25 as shown in Table 4. The current price for 1 gram in Queensland is around \$20 (see attachment)

³¹ The only line item we have attempted to calculate a broad estimate for is 'Cannabis tax & fees'. We apply a simple 10% tax plus 1% for licences and fees (total = 11%), resulting in a \$82.5M tax/fee from Queensland residents and \$9.4M from visitors, a total of \$91.9M. This is for after three years of operation.

³² The 15% figure comprises 10% current users (whole pop.) plus a 50% increase (5%) due to increased accessibility, and new edible (non-smoking) products, and the likely under-reporting of current cannabis use in surveys. The proportion of tourists has been left at a more conservative 10% due to unknown international tourist consumption.

³³ Tourism and Events Queensland 2016. Domestic Tourism Snapshot: year Ending June 2016 <https://cdn-teq.queensland.com/~media/104cc2b01a9c453893b82a438e0b8724.ashx?vs=1&d=20160929T093151> Accessed 27 November 2016

³⁴ Tourism and Events Queensland 2016. International Tourism Snapshot: Year Ending June 2016. <https://cdn-teq.queensland.com/~media/794d592840d045938104cca2e5a1c8ba.ashx?vs=1&d=20160831T110937> Accessed 27 November 2016

Table 5: Main Likely Economic and Social Benefits and Costs of a ‘Regulate & Tax’ Queensland Recreational Cannabis Market (QRCM)

	Govt.	Consumer	Society	Comments
State Govt. Revenue & Expenditure				
(a) Cannabis tax & fees	High Benefit	Low Cost	NA_ND	^ revenue from production/sales likely to exceed \$90M/year after Yr3 – (see p.15 report)
(b) Implementation & administration	Medium Cost	NA_ND	NA_ND	^ high cost for initial implementation; ongoing admin/compliance lower (\$TBI)
(c) Fines	Low Cost	Medium Benefit	NA_ND	v revenue from cannabis fines; ^ benefit to consumers from no/lower fines (\$TBI)
(d) Policing	High Benefit	NA_ND	NA_ND	v costs likely significant, some policing still necessary under QRCM (\$TBI)
(e) Courts	High Benefit	NA_ND	NA_ND	v costs likely significant, some court appearances still necessary under QRCM (\$TBI)
(f) Corrective Services	High Benefit	NA_ND	NA_ND	v costs likely significant, some incarceration still necessary under QRCM (\$TBI)
(g) Health	Low Cost	NA_ND	NA_ND	^ small cost over current costs for health services (\$TBI)
Economic Activity				
(h) Businesses/jobs (cannabis industry)	Medium Benefit	NA_ND	Medium Benefit	^ no. of new businesses & jobs, depends on QRCM model e.g. retail through new or existing bus.
(i) Job disruption (attend court, prison)	Small Benefit	High Benefit	NA_ND	v number of hours away from work for those employed and employers
(j) Job prospects (criminal record)	Small Benefit	High Benefit	NA_ND	^ job prospects for consumers than at present; ^ participation rate/employment
(k) Price of cannabis (consumer surplus)	NA_ND	Medium Benefit	NA_ND	expected consumer surplus over time as QRCM matures, depending on Govt tax/fees (\$TBI)
(l) Transactions (purchasing cannabis)	NA_ND	Medium Benefit	NA_ND	v transaction costs for consumers by purchasing conveniently from local businesses (\$TBI)
Health				
(m) Mental health	See (g)	Low Cost	NA_ND	^ mental health issues for consumers e.g. schizophrenia, likely relatively small
(n) Physical health	See (g)	Low Cost	NA_ND	^ physical health issues for consumers e.g. respiratory disease, likely relatively small
Social				
(o) Crime (e.g. break & enter, theft)	See (d)(e)(f)	High Benefit	High Benefit	v monetary cost to Govt; ^ to consumers – reduced need to commit crime; ^ society – lower crime
(p) Motor transport (driving)	See (d)(e)(f)	High Benefit	NA_ND	adopting THC level testing as for alcohol like Colorado > fewer charges consumers; v Govt. costs
(q) Stress (stigma, arrests, on family)	NA_ND	High Benefit	NA_ND	v stress for consumers (decreased fear of charges/arrest; losing job/home; family breakdown)
(r) Product safety	NA_ND	High Benefit	NA_ND	^ safety for consumers re. product testing and labelling

NA_ND = Not applicable or Non-direct

\$TBI = dollar amount to be investigated

v = decreased; ^ = increased; > = leading to

Policy Setting Implications for Government

The 'war on drugs', by most accounts, has been a failure. Prohibition of popular 'vices' in today's society, where people are better educated, have access to more sophisticated technologies, and are connected like never before, mean governments increasingly have a difficult job of trying to contain popular social movements.

The recreational cannabis movement is clear in western democracies, particularly in countries like the US, Canada and Australia. In the US, while there are questions around what position the incoming administration will take, considering the state/federal law conflict on which the Obama administration has given tacit approval to states doing their own thing if well managed (a 'states rights' approach), opposition to these states taking their own course on recreational cannabis would likely be futile in the long run.

The US state of Colorado seems to have benefited from regulating and taxing recreational cannabis with a near doubling of tax and licence/fee revenue each year since the legalised market commenced in January 2014, from \$82.4 million in 2014-15, to \$134.4 million in 2015-16, to over \$200 million (expected) in 2016-17.

In Canada, Prime Minister Justin Trudeau campaigned heavily on legalising cannabis in the leadup to his election and he continues to make statements that Canada will legalise the recreational use of cannabis in due course, although it is taking longer than some people expected.

As Table 5 showed, the greatest benefits of a QRCM are to government and cannabis consumers. For government, there is likely to be increased tax and fee revenue of around \$90 million in the medium term (three to five years) and significant savings in terms of decreased police, court and prison costs.

There are likely to be some additional costs to government in terms of the establishment of the regulated market and ongoing administration and compliance, as well as a likely small cost increase associated with mental and physical health issues for new consumers or existing consumers who increase their usage e.g. schizophrenia in predisposed persons and respiratory disease associated with cannabis smoking. There is, however, also a possibility that respiratory disease might decrease with the contemporary way for many to consume cannabis being by way of 'edibles', like in Colorado. These additional health costs could be mitigated by a public education campaign. It is also important to note that the hundreds of thousands of Queenslanders who currently consume cannabis are already, or potentially, a cost to government.

The economy is likely to benefit in terms of a new cannabis industry, depending on the particular regulate and tax model adopted. A more open market, where existing and new businesses can legally sell cannabis from cafes and the like will be of the greatest benefit to the economy as new products and innovative delivery mechanisms are developed and new jobs created. A tighter, more rigid model might see sales limited to existing retailers (e.g. liquor outlets which

already have security systems in place and a well-developed culture of limiting sales to adults). The magnitude of the benefit to the Queensland economy of a legalised cannabis industry, as well as having workers and potential workers spending less time negotiating the legal system, is difficult to quantify in a preliminary report like this. Nevertheless, it is likely to be substantial.

In a legalised system, consumers, once purchasing cannabis on the black market and at risk of being fined and imprisoned with the associated police record and social stigma limiting their future job prospects, would realise significant benefits by purchasing from licenced premises. They would also benefit in terms of product safety e.g. labelling information and product testing for potency, homogeneity and contamination. In many cases, consumers would also benefit from lower transaction costs by conveniently purchasing from local businesses. Importantly, they are also likely to realise a financial benefit via a consumer surplus as the QRCM matured and the price of cannabis decreased to below the black-market price in a competitive environment.

Society would also benefit, largely through a decrease in crime-related activities like break and enter and property theft crimes as the price of cannabis decreased and people purchased product legally and more affordably. They would also benefit from government being able to spend more in other areas and/or being able to pay down government debt.

Like the rapid uptake of medicinal cannabis by state governments in Australia recently, and over the next 12 months, consideration of a regulated and taxed recreational cannabis market is likely to be not too far behind with state governments looking to explore new revenue streams, decreasing costs, and boosting their economies.

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Attachments

Average Weed Prices				
Quality	Average (\$/Oz.)*	Sample Size		
High Quality	\$241.73	3909		
Medium Quality	\$199.29	3714		
Low Quality	I feel bad for these guys -->	229		

* Averages are corrected for outliers based on standard deviation from the mean.

Submissions				
Trinidad, Colorado	\$40	a quarter	medium quality	November 25, 2016
Grand Junction, Colorado	\$275	an ounce	medium quality	November 24, 2016
Allenspark, Colorado	\$700	an ounce	low quality	November 23, 2016
Colorado Springs, Colorado	\$225	an ounce	low quality	November 22, 2016
Denver, Colorado	\$100	a half ounce	high quality	November 22, 2016
Denver, Colorado	\$25	an eighth	medium quality	November 21, 2016
Denver, Colorado	\$100	an ounce	high quality	November 21, 2016
Salida, Colorado	\$60	a quarter	high quality	November 20, 2016
Breckenridge, Colorado	\$53	a half ounce	medium quality	November 19, 2016
Parker, Colorado	\$33	an eighth	medium quality	November 17, 2016
Denver, Colorado	\$12	a gram	medium quality	November 16, 2016
Colorado Springs, Colorado	\$85	5 grams	high quality	November 15, 2016
Littleton, Colorado	\$30	an eighth	high quality	November 15, 2016
Denver, Colorado	\$100	an ounce	medium quality	November 15, 2016
Manitou Springs, Colorado	\$20	a gram	medium quality	November 13, 2016

Source: www.priceofweed.com/prices/United-States/Colorado.html, Accessed 27.11.2016

Average Weed Prices				
Quality	Average (\$/Oz.)*	Sample Size		
High Quality	\$330.62	269		
Medium Quality	\$269.12	754		
Low Quality	I feel bad for these guys -->	52		

* Averages are corrected for outliers based on standard deviation from the mean.

Submissions				
Townsville, Queensland	\$296	an ounce	high quality	November 23, 2016
Ipswich, Queensland	\$19	a gram	medium quality	November 23, 2016
Loganlea, Queensland	\$60	a quarter	medium quality	November 17, 2016
Brisbane, Queensland	\$150	an ounce	medium quality	November 6, 2016
Ipswich, Queensland	\$35	an eighth	medium quality	November 5, 2016
Sunnybank, Queensland	\$200	a half ounce	medium quality	October 23, 2016
Brisbane, Queensland	\$1000	an ounce	medium quality	October 15, 2016
Beenleigh, Queensland	\$100	a quarter	high quality	October 15, 2016
Cairns, Queensland	\$20	a gram	medium quality	October 12, 2016
Sunnybank, Queensland	\$75	10 grams	high quality	October 12, 2016
Strathpine, Queensland	\$19	a gram	medium quality	October 9, 2016
Maryborough, Queensland	\$50	an eighth	high quality	October 3, 2016
Palmwoods, Queensland	\$230	an ounce	medium quality	October 1, 2016
Brisbane, Queensland	\$40	a quarter	high quality	September 30, 2016
Coorparoo, Queensland	\$20	a gram	medium quality	September 22, 2016

Source: www.priceofweed.com/prices/Australia/Queensland.html, Accessed 27.11.2016