



Market Revenues and Economic Opportunities in the Legal Cannabis Market in Uruguay

POLICY
COMMENTARY

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ABSTRACT

Background: The regulated cannabis market in Uruguay has received international attention as an alternative to profit-maximising cannabis legalisation models. However, relatively little is known about how this market has been operationalised. The goal of our policy commentary is to identify the key actors with a role in the legal regulated cannabis market, provide estimates of the annual revenues, discuss the existing market opportunities, and consider the implications for the economic aspects of social justice.

Methods: Our commentary is informed by a review of key relevant literature and other documentary sources, as well as insights from qualitative fieldwork in Montevideo.

Results: Licensed production companies and pharmacies are key for-profit organisations involved in the recreational cannabis market in Uruguay. With prices, products, and market size controlled by the government, the entrepreneurial decisions of licensed producers are limited, resulting in a focus on cost reduction. The production sector is characterised by a small number of companies that operate at economies of scale, illustrating a ‘commoditised’ cannabis market model. The pharmacy-only retail framework has created new revenue for community pharmacists but may hinder the participation of small-scale legacy players. The not-for-profit Cannabis Social Club (CSC) sector has lower entry barriers and fewer requirements regarding products and prices, but only a few key individuals may benefit financially due to the sector non-profit regulation. Estimates of annual revenues in the licensed production (4–4.8 million USD), pharmacy point-of-sale (1.1–2.2 million USD) and CSC sectors (8–17.7 million USD) are provided.

Conclusions: Despite not being designed to pursue economic objectives, the state-controlled cannabis market in Uruguay has created commercial opportunities for several actors. Our analysis suggests that this regulation may represent a compromise from an economic and social justice perspective.

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Uruguay was the first country to legalise and regulate the production, distribution, and sale of recreational (non-medical) cannabis to adults in 2013 (Queirolo, 2020). The Uruguayan cannabis legalisation stands out from similar reforms in some US states and most provinces and territories in Canada in several ways. First, Uruguay adopted a highly-regulated state-controlled cannabis legalisation framework characterised by direct government involvement in the cannabis market (Hudak, Ramsey and Walsh, 2019; Walsh and Ramsey, 2015). Second, the three legally regulated ways of accessing cannabis (i.e., home-growing, Cannabis Social Clubs, and retail access through licensed pharmacies) are mutually exclusive: cannabis consumers are required to register in a national cannabis registry and can access only one of the three legal channels of supply at a given time (Cerdá and Kilmer, 2017; Queirolo, 2020). Third, this framework has been designed primarily based on public safety, health, and human rights objectives, rather than with the intention of maximising state revenue or private profits (Pardo, 2014; Queirolo, Rossel, Álvarez and Repetto, 2019). These have also been the goals explicitly articulated in the legislative text introducing the new policy. Specifically, several features of the policy seem to reflect these priorities, such as the absence of sales taxes on cannabis products (restricting financial revenue for the government); the prohibition on advertising; the restriction of legal access to Uruguayan citizens and residents (preventing the creation of a cannabis tourism sector); and government control over a range of key market indicators. The government restricts the total amount of cannabis produced and sold at pharmacies, sets the price of products sold in pharmacies, and the legislation imposed maximum monthly purchase limits (40 grams) for consumers at both pharmacies and Cannabis Social Clubs (CSCs). This effectively amounts to government control of the size of the legal cannabis market. Although the Uruguayan government (and the national cannabis regulatory agency *Instituto de Regulación y Control del Cannabis*, hereafter IRCCA) do not directly produce or sell cannabis through government stores, there is a close oversight of the regulated cannabis market (Caulkins and Kilmer, 2016; Pardal et al., 2023).

While Uruguay's cannabis policy is not geared towards profit-maximisation, it has provided new commercial opportunities, and the private actors operating in this market include both for-profit companies as well as not-for-profit associations. For example, cannabis cultivated for sale in licensed pharmacies is produced by for-profit companies with domestic and foreign shareholders. As businesses, both pharmacies and producers must generate returns for their owners and dividends for investors. While CSCs are not-for-profit civil associations, individuals with key roles and CSC employees may receive remuneration for their work. Furthermore, to remain financially viable, some CSCs charge membership enrolment fees and a relatively higher price per gram of cannabis (Pardal, Queirolo, Álvarez and Repetto, 2019; Queirolo, Boidi and Cruz, 2016).

Given the commercial opportunities created under the strict state-controlled framework implemented in Uruguay, it is important to reflect on how the opportunities for wealth creation and economic decision-making related to cannabis are distributed in the society. Academic literature on the economic aspect of social justice in the cannabis legalisation reform identified several policy recommendations, including the distribution of government tax revenue from cannabis sales to minority communities and the implementation of social equity programs where individuals from communities disproportionately affected by prohibition are prioritised for entrepreneurship and employment (Adinoff and Reiman, 2019; Hendy, Mauri and Creary, 2023; Kilmer, Caulkins, Kilborn, Priest and Warren, 2021; Owusu-Bempah, 2021). However, most analyses on the social justice aspect of the new cannabis economy originate from North America, where debates have rightfully focused on racial issues, and occurred in the context of the dominant cannabis legalisation approach in the US, namely, the fully commercial market for cannabis where for-profit entrepreneurs compete for market share and the state intervention is more limited.

Less attention has been paid to the market dynamics and fairness of the new legal cannabis economy outside North America and in more restrictive policy settings such as Uruguay. This commentary lays the foundations for reflections on the economic justice under Uruguay's state controlled cannabis market by analysing how the new legal cannabis market is structured (e.g., the number of players operating at different levels of the supply chain), the level and

distribution of revenues from the legal cannabis trade, and new employment opportunities created in the distinct supply channels (i.e., licensed production, pharmacy points-of-sale, and CSCs).

In this commentary, we map the key private actors with a financial stake in the legal cannabis market in Uruguay and analyse how these actors operate, including what market decisions they are able to make within a strictly regulated state-controlled cannabis framework. The analysis focuses on the economic opportunities for private actors rather than the public sector (while we recognise that state is an important stakeholder who provides resources for policy enforcement and monitoring, and collects a portion of revenues from cannabis sales). Using data from IRCCA reports, we estimate annual revenues in distinct sectors of the legal cannabis market. Finally, we reflect on the issue of economic justice and the types of actors likely to enter the market and benefit economically under this system.

The commentary draws on our ongoing work on cannabis policy reform in the Americas, fieldwork conducted from October to December 2023, including interviews with key cannabis policy stakeholders in Uruguay (i.e., public sector staff, cannabis producers, pharmacists, analysts, activists, and health experts), field visits to pharmacy points of sale, licensed producers and a CSC, as well as IRCCA reports and the academic literature. For more detail about data that informed this commentary, see endnote.¹

MAPPING THE KEY ACTORS IN THE LEGAL CANNABIS MARKET IN URUGUAY

The Uruguayan regulatory framework allows the cultivation of cannabis by registered home growers, CSCs, and licensed producers (see [Figure 1](#)). At the time of writing this commentary and analysis (January 2024), there are 13,118 registered home growers who can cultivate up to six plants at their place of residence ([IRCCA, 2024a](#)). In addition, the 355 legal CSCs produce and sell cannabis to their respective registered members, with a total of 12,119 registered CSC users (average 34 members/club) ([IRCCA, 2024a](#)). Finally, licensed production companies are responsible for cultivating and delivering cannabis products to the 38 participating pharmacies (as of January 2024), which then sell cannabis products directly to consumers. Despite being the last of the three supply channels to be implemented (home cultivation was possible from August 2014, CSC registration opened in October 2014, with pharmacy sales only beginning in July 2017), commercial pharmacy-based supply is the most popular legal way of accessing cannabis by registered consumers, with 66,270 registered users as of January 2024 ([IRCCA, 2024a](#)). In each supply option, consumers are allowed to legally access 480 grams of cannabis per year and a maximum 40 grams per month. With the exception of home cultivation, which is intended exclusively as a self-supply option, the two other channels of supply involve the sale and distribution of cannabis. CSCs manage all steps of the supply chain for their registered members, while the third channel involves separate production by licensed producers for retail sale at pharmacies ([Figure 1](#)).

In addition to the key actors with a direct involvement in the legal supply of cannabis shown in [Figure 1](#), there are also associated industries providing a range of products and services on the cannabis market. These include laboratory testing companies, grow light providers, pesticide producers, security companies, *grow shops*, law firms and consultancies. Beyond this range

¹ The authors have conducted a number of exploratory and evaluation studies in the 10 years since legalisation of cannabis in Uruguay (see e.g., [Pardal et al., 2019](#); [Queirolo, Repetto, Sotto, & Álvarez, 2023](#)). Most recent empirical data to inform this commentary includes face-to-face interviews about successes and challenges experienced during the decade of implementing the state-controlled cannabis market with 22 key stakeholders involved in the cannabis legalisation in Uruguay, conducted from October to December 2023 (7 pharmacy representatives, 6 public agency staff, 5 cannabis industry actors, 2 public policy experts and 2 health experts), a group interview with 5 cannabis activists, and in-person visits to legal cannabis production plants, licensed pharmacies, and a CSC in Montevideo. Interviewed pharmacists, licensed production representatives, and relevant government officials were asked about the estimated proportion of retail price that constituted their revenue. The responses from stakeholders who provided answers, triangulated with media reports, were used as a basis for calculating revenues of the production and pharmacy retail sector. Interviews were recorded to assure accuracy of information. We also attended several events in Montevideo organised by public agencies, universities, civil society organisations, and the private cannabis sector to mark the 10th anniversary of passage of the cannabis legalization law in November and December 2023. The fieldwork and stakeholder interviews were conducted as part of a larger international study exploring “middle-ground” models for cannabis law reform in Quebec (Canada), Jamaica, Uruguay, and New Zealand. The study protocols, including provision of informed consent from interviewed stakeholders, received approval from the Massey University Human Subjects Ethics Committee (ref. 19/37).

of actors in the legal market, there are other actors involved in the illegal and grey market of cannabis, but they are not the focus of this commentary.

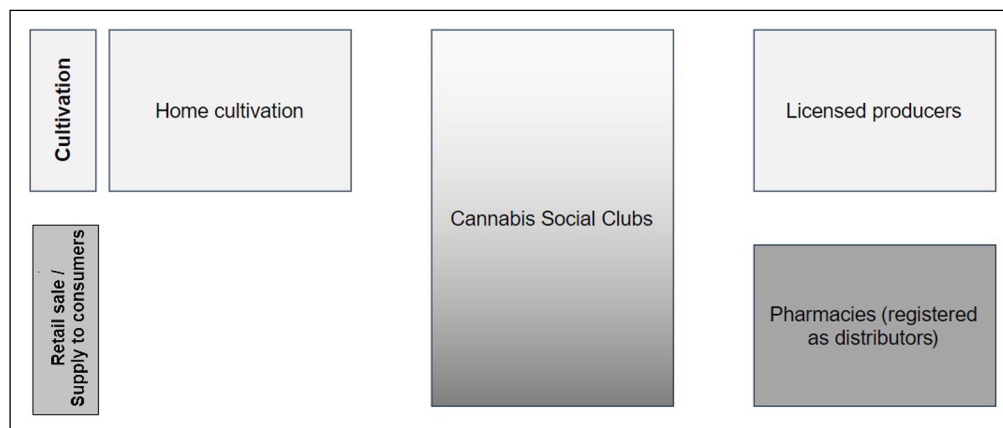


Figure 1 Overview of the three legal supply channels in Uruguay.

Source: Authors' depiction based on Uruguayan legal framework (Ley 19.172).

ENTREPRENEURIAL OPPORTUNITIES AND MARKET DECISION-MAKING IN URUGUAY

1. THE ROLE OF REGISTERED SMALL-SCALE GROWERS IN THE LEGAL CANNABIS ECONOMY

The sale of cannabis cultivated at home is prohibited. As such, the economic opportunities for registered home growers are very limited. Individual home growers need to fulfil the general requirements that apply to consumers in all supply channels (e.g., registration in the national database, meeting age (R18) and residency criteria), and can cultivate up to six plants per household, with a maximum production limit of 480 grams of cannabis per year. If each registered cultivator produced this maximum amount, the estimated annual production volume would reach nearly 6,300 kg (13,118 registered cultivators × 480g)—more than the combined production by the licensed producers and CSC sectors in 2023 (see [Figure 2](#) and discussion below). If each registered cultivator produced 15 gram/month (i.e., equal to the reported average monthly purchase by active consumers registered in the pharmacy supply²), the annual production volume in the legal home-cultivation sector would amount to 2,361 kg (15grams/month × 12 months × 13,118 registered home growers)—slightly less than the volume of cannabis dispensed in the CSCs in 2023 (i.e. 2,686 kg ([IRCCA, 2024a](#))). Despite the estimated volume of production, there are no opportunities for generation of legal revenue due to the prohibition on sale of home-grown cannabis.

There are no restrictions on the strains or THC content of cannabis grown at home, potentially making it an attractive alternative to pharmacy-based supply. Possibly, the biggest economic advantage for registered home-growers is the potential to reduce the cost of obtaining legal cannabis for personal consumption, particularly compared to supply through CSCs (see below).

While the sale of home-grown cannabis is prohibited, sharing and gifting within the household is allowed. Some of the sharing within a household may involve barter, potentially providing some economic benefit to home-growers, although the legality of this practice is unclear. According to official estimates based on the general population survey, registered home-cultivators share cannabis with an average of 1.3 persons in a typical month ([IRCCA, 2021, p.16](#)). One study (comprising mostly non-registered growers) found that 15% of surveyed cannabis home-growers in Uruguay gave their surplus of cannabis to friends, while 4% reported selling it ([Aguiar and Musto, 2022](#)). Yet, another survey found that 16% of home-growers sell

² We used the latest 12-month data publicly reported by IRCCA (from July 2022 to June 2023) to calculate the average monthly purchase by consumers who completed a transaction in a given month (average purchase ranged from a low of 13.7 gram in June 2023 to 17.6 gram monthly in March 2023 in this period) ([IRCCA, 2023a](#)). Note the average purchase volume was calculated using data only from active consumers, that is, those who have completed a transaction in a given month (see Table 5 in: [IRCCA, 2023a](#)).

for a profit, or to cover their costs (Queirolo, Álvarez and Sotto, 2021). Given the illegal nature of selling home-grown cannabis, the surveys may underestimate the actual levels of sales by home-growers. However, as stated above, due to illegality of selling home-grown cannabis, any financial benefits would be outside the legal cannabis economy.³

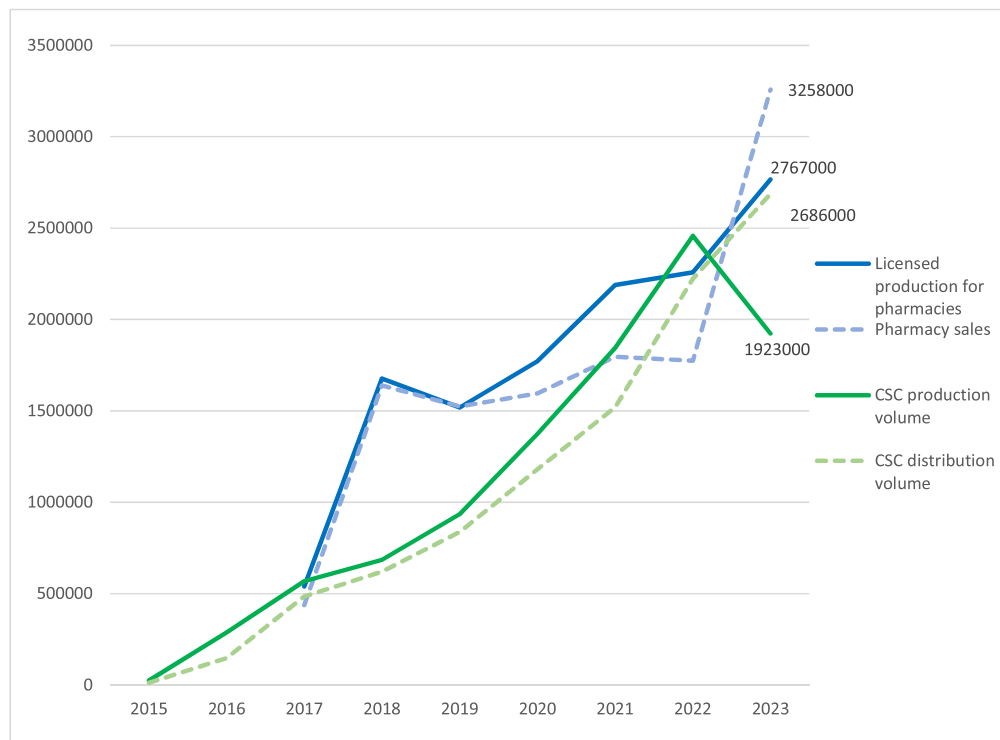


Figure 2 Annual volume of cannabis production and sales in pharmacies and CSCs (in grams).

Source: IRCCA (IRCCA, 2024a).

2. CANNABIS SOCIAL CLUBS: ‘HYBRID’ ORGANISATIONS?

CSCs are associations of cannabis consumers with a legislated mission to cultivate and supply cannabis to members. As civil associations, they operate on a not-for-profit basis, and are differentiated from the private (business) sector by their social mission and voluntary character. In addition to embracing typical civil society values such as community and belonging, CSCs often control significant resources and need to manage their finances to remain viable. As a result, CSCs, like many other civil society associations, may deviate from the ‘ideal’ civil association model by adopting practices from the business sector, for example, hiring paid employees and charging for their services rather than relying on voluntary work by members or donations. The business literature refers to this mixing of social and financial objectives in one organisation as ‘hybridity’ (Battilana and Lee, 2014). In the drug policy literature, CSCs have been described as ‘dual purpose’ organisations (Queirolo et al., 2016).

CSCs in Uruguay can grow up to 99 (flowering) plants at a time and have between 15 to 45 members. The costs of cannabis cultivation, including rent and energy (particularly for CSCs in urban zones that tend to grow indoors) need to be recovered and managed through members’ contribution and fees. Maintaining financial sustainability has been identified as one of the main challenges facing clubs in Uruguay, and studies identify a variety of approaches to resource management (Pardal et al., 2019; Queirolo et al., 2016). The more cooperative CSCs are characterised by a commitment to collective work and activism, and encourage non-financial contributions from members to support the functioning of CSCs, to reduce costs and the price of cannabis for members (Pardal et al., 2019; Queirolo et al., 2016). Other CSCs operate as ‘micro-businesses’, where members procure and pay for their services, with little to

³ The dynamics between home-growing (registered and non-registered), the two other legal supply channels (i.e., pharmacy and CSCs), and the illegal market are complex. Cannabis consumers, including home-growers, have been found to experiment with multiple sources of cannabis; for example, in one study half of cannabis home-growers were registered to purchase cannabis in pharmacy (Aguiar and Musto, 2022). It was estimated that 17 tons of cannabis were produced through domestic home cultivation in Uruguay in 2017, representing approximately 40% of the total cannabis market at the time (Aguiar and Musto, 2022). The total (legal and illegal) cannabis market was estimated at 44 tons in 2018 (Observatorio Uruguayo de Drogas and Junta Nacional de Drogas, 2019), and no official updates to this estimate are available at the time of writing.

no involvement in the production process or club governance. The latter have been referred to as 'quasi-dispensaries' (Pardal et al., 2019).

With no shareholders or formal owners, decisions in CSCs are made by an elected board of directors (as required of civil associations), and through annual general assembly meetings. However, in some clubs, there has been a shift away from this 'ideal' civil association governance towards more managerially oriented practices characteristic of the private sector. For example, in some clubs, board elections and general assembly meetings function as "a formality with little participation" (Pardal et al., 2019), with members more interested in purchasing cannabis than engaging in voluntary activities or governance. In these scenarios, individuals in positions of power (usually CSC founding members) make key decisions, and may also benefit economically from their key roles through paid employment. The development of this managerially controlled CSC model is unsurprising, given founders have sometimes invested significant time and financial resources in establishing club operations in the first place.

CSCs can only distribute cannabis flower, but no limitations on THC content, cannabis strains, or the prices at which they sell cannabis have been introduced to date. This is an important difference from the pharmacy-based supply channel (see below). Prices of cannabis at CSCs tend to be higher than at pharmacies (Álvarez, Queirolo, Repetto and Pardal, 2022; Pardal et al., 2019). For example, a CSC we visited in December 2023 reported charging each member 180 USD (165 Euro) for the 40 grams of cannabis supplied monthly. This equates to about 4.5 USD per gram (approximately 4.1 Euro), nearly double the most expensive cannabis product sold at pharmacies at the time (2.4 USD/gram = 2.2 Euro/gram). In addition, CSCs typically require a one-off enrolment fee. Consistent with earlier research (Pardal et al., 2019), we found that some CSCs require members to purchase the maximum monthly limit of 40g, but more research is needed to establish the prevalence of this practice.

We should note that both the enrolment fee as well as the price per gram vary greatly across CSCs, making estimation of CSC revenues difficult. One study (based on insights from 15 CSCs in 2018) found that the price of cannabis ranged from 0.91 USD to 5 USD per gram (0.85 Euro–4.6 Euro), with an average of 3 USD/gram (2.8 Euro) (Pardal et al., 2019). Prices have likely increased since then, but even based on these 2018 price estimates, the annual CSC sector revenue in 2023 would reach approximately 8 million USD (i.e., 2,686,000 grams dispensed by the clubs in 2023 (see Figure 2) × 3 USD/gram), with approximate 23,000 USD annual gross sales revenue per club (i.e., 8,058,000 USD total sector revenue / 355 clubs). Once prices are adjusted in line with the price inflation observed in pharmacy-based supply between 2018 and 2023,⁴ the total annual sector revenue estimate increases to 17.7 million USD (i.e., 2,686,000 grams dispensed by the clubs in 2023 × an 'average' adjusted price of 6.6 USD/gram). This amounts to an estimated 49,940 USD in annual gross sales per club (i.e., 17,727,600 USD / 355 clubs). As CSCs are not-for-profit associations, there are no net profits to distribute in the form of shareholder dividends. Instead, all income generated through cannabis sales and enrolment fees must be used to support their operations (which, as described above, may involve covering salaries).

The sale of cannabis to non-members is prohibited. There have been incidental reports of CSCs offering cannabis to tourists or organising "cannabis tours". In one instance, IRCCA revoked a CSC's license after the club was found to be offering cannabis samples to tourists through a local hostel (Hudak et al., 2019). Reported incidents of cannabis sales to non-members indicate there may be some attempts to generate additional revenue, although there is little research to estimate the scale of this phenomenon. It is also possible that some CSCs engage in sale to non-members to dispose of excess production.⁵ For example, a CSC with a maximum of 45 members is legally allowed to supply 21.6 kg of dry cannabis flower to its members annually (45 members × 480 grams individual annual limit). Through efficient cultivation (e.g., three harvests per year) and at the maximum legal cultivation allowance (i.e., 99 flowering plants

⁴ From 2018 to 2023, average retail price of cannabis products in pharmacies increased 2.2 times (from 200 Uruguayan pesos per 5g product in February 2018 to 440 Uruguayan pesos (11.3 USD) average product price in August 2023, i.e. 420 pesos per package of 'Alfa', 440 pesos per package of 'Beta' and 460 pesos per package of 'Gamma' product (IRCCA, 2023c)). Available market sales data is not broken down by product type.

⁵ In addition, individual registered club members may share or sell cannabis legally obtained through the CSC. In a 'shared membership practice' two or more people combine resources to access CSC-produced cannabis via one registered member. IRCCA estimated that a registered CSC member on average share their cannabis with 1.3 people (IRCCA, 2021, p.16).

at a time), CSCs may well be able to produce more than the legal limit they are allowed to distribute to members.⁶ Any revenue from potential sales to non-members would be outside the legal cannabis economy.

Due to the prohibition on cannabis advertising and marketing, contact details for CSCs are not publicly available⁷ and there is no signage outside their premises. Information about individual CSCs spreads through word-of-mouth, making CSCs somewhat less accessible to new cannabis consumers than pharmacy-based supply. From the consumers' perspective, the appeal of CSC-cultivated cannabis lies in the greater choice of strains and potencies than offered through pharmacy supply, and the additional flexibility to acquire cannabis (i.e., not limited to 10g/week as is the case in pharmacies, and collection in a more private space), as well as the social aspects of the association (if supported by the club). However, products do not undergo the same quality-assurance processes as required for the licensed production destined for pharmacies (see below).

3. CANNABIS PRODUCERS IN A GOVERNMENT-CONTROLLED MARKET: AN INCIPIENT SECTOR?

The cannabis dry flower sold in pharmacies is cultivated by a limited number of for-profit businesses selected in a competitive tender process by IRCCA. In October 2015, two cultivation companies were selected by IRCCA (from over 20 applicants), both with a mix of Uruguayan and foreign investment (Hudak et al., 2019). At the time of writing, there were three companies actively producing (two licensees withdrew from the market), including one of the initially licensed businesses,⁸ with each allowed to produce two tonnes of cannabis a year. Also as of early 2024, there was a shortage of product on the market, with none of the companies producing at the maximum allowed production limit. The stakeholders we spoke to gave several reasons for the slow pace of scaling up production, including ongoing industry uncertainty about consumer demand (particularly in the early stages of legalisation when only low potency products with 9% THC were allowed), regulatory delays, and the learning curve involved in establishing a large-scale cannabis cultivation plant. The introduction of a higher THC-content strain called 'Gamma' (about 15% THC) in December 2022 and the extension of product expiry dates (to two years) have provided some reassurance to producers in relation to scaling up commercial production. Indeed, IRCCA has reported an increase in pharmacy sales (Figure 2) and consumer registrations from early 2023, attributing these trends to the introduction of the new 'Gamma' strain (IRCCA, 2023a). In October 2024, a fourth product strain named 'Épsilon' was made available via pharmacies with THC concentration of up to 20% CBD up to 1%.

The three production plants are located in the same fenced and secure location, on a 24-acre plot of land leased to them by the government (Hudak et al., 2019). Although this means companies are not able to select the location of their primary operating site, the industry stakeholders we spoke to were positive about the arrangement, highlighting the ability to frequently interact with other businesses in the cannabis sector, the benefits of regular communication with IRCCA, as well as other logistical benefits (e.g., producers are able to share the cost of transporting finished products to pharmacies). While initially only greenhouse production was allowed, producers can now also cultivate outdoors. All cannabis from the licensed facilities is tested twice (for THC potency, mould, bacteria, pesticides, etc.), and the testing protocol includes quality control of the final packaged products.

When pharmacy sales began in July 2017, only two types of cannabis flower strain were allowed on the market—'Alfa' and 'Beta'. These strains were initially capped at 2.5% THC and 6–7% CBD, but subsequently increased to 9% THC and 3% CBD in December 2017. The strains were selected by the government, with IRCCA sourcing and supplying the starting material (mother plants) to the licensed producers. In December 2022, a third product with THC potency

⁶ The club we visited in December 2023 adopted indoor cultivation techniques and reported producing approximately 8 kilograms of dry cannabis product per harvest, with 3 harvests per year.

⁷ IRCCA website lists registered CSCs which are identified by their name, city and date of incorporation: <https://ircca.gub.uy/vias-de-acceso/clubes-de-membresia-con-habilitacion-vigente/>.

⁸ The other of the two companies initially selected to cultivate cannabis in 2015 ceased operation. It received significant initial investment from a high-profile Uruguayan businessman Juan Sartori, but was sold to the Canadian-owned Aurora in 2018, which subsequently ceased its operations in Uruguay in 2020 (Delgado, 2021). In early 2025, IRCCA announced licensing of further 4 cultivation companies.

of 15% ('Gamma') was introduced, and more recently (October 2024), fourth Epsilon strain with THC potency up to 20%. Companies can decide independently how much of each strain to cultivate, and the industry stakeholders we spoke to reported they have shifted as much as 80% of their production to the 'Gamma' strain, reflecting that the resulting higher potency products attract higher consumer demand (IRCCA, 2023a).

Product retail prices are set by the government. As of March 2024, after a series of six monthly reviews, cannabis were retailing at an average price of 2.4 USD per gram (11.8 USD per 5 gram package), with 'Alfa' being the cheapest (2.2 USD/gram = 2 Euro/gram) and 'Gamma' the most expensive (2.6 USD/gram = 2.4 Euro/gram) (IRCCA, 2024b). This is more than a twofold increase from the initial retail price of approximately 1 USD per gram in mid-2017. General price inflation in Uruguay and cannabis market factors appear to have played a role in price increases (e.g., higher price for 'Gamma' due to greater consumer demand and higher THC content). The licensed producers we spoke to described the early price setting (i.e., 1 USD/1 gram) as 'arbitrary', suggesting they were "almost working at a loss" in the early stages of commercialisation. The current price setting seemed adequate to most stakeholders we engaged with. To provide context, the 5-gram cannabis product available in pharmacies costs approximately the same as a 750 ml bottle of a popular red wine brand, or two packets of cigarettes (with standard 20 cigarettes per packet).

Using retail sales volumes in 2023 provided by IRRCA (IRCCA, 2024a), we estimate that in 2023 gross sales of cannabis in pharmacies were worth approximately 7.4 million USD (approximately 3,258,000 grams were sold in 2023 (IRCCA, 2023b, 2024a), that is, 651,600 packages sold at an average price of 11.3 USD per package at the time). It has been previously reported that approximately 60% of the retail price constitutes revenue of the licensed producers (Maas, 2022), and this figure is consistent with estimates (55%–65%) by stakeholders we interviewed (see Figure 3). Based on these assumptions, gross revenue from the licensed cannabis production sector in 2023 is estimated at approximately 4–4.8 million USD (i.e., 55%–65% × 7.4 million). We are unable to estimate company profits due to lack of information about production, transport, and other operating and overhead costs. As described above, the entrepreneurial decisions of licensed cannabis producers are highly restricted, namely, they cannot choose product varieties (strains), product types (i.e., only dry flower products are allowed to be sold), or potencies, nor set product prices, nor even independently source mother plants. In this environment, reducing company costs and increasing the efficiency of production has become the focus. As one industry stakeholder explained, "If IRCCA decides about the market and the price, the only thing I can manage are my costs". The government's ability to license additional producers may be an important factor influencing the relationship between the three producers and the regulator, as these companies strive to maintain their share of the tightly controlled market and secure profitable operations through ensuring economies of scale.

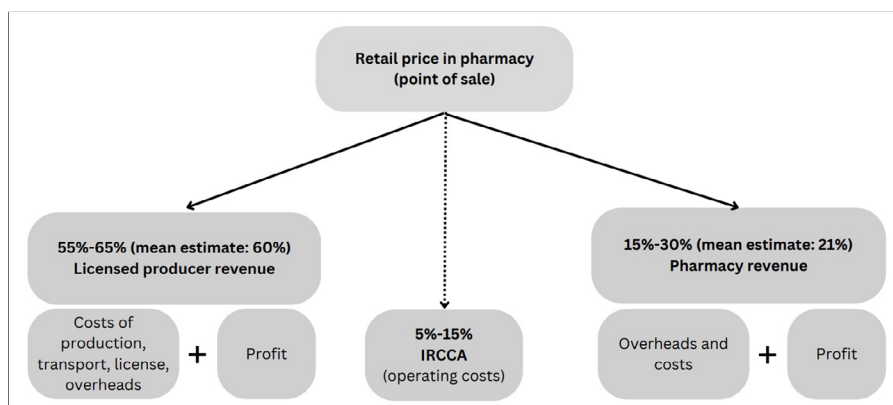


Figure 3 Approximate breakdown of revenue from retail sales of cannabis in pharmacies among licensed producers, pharmacy points-of-sale and IRCCA.

Source: Authors' depiction based on estimates from stakeholder interviews, triangulated with grey literature and media reports (e.g., Maas, 2022; Maybin, 2019).

With advertising, promotion, and marketing prohibited, the public profile of producers is limited. As of early 2024, they do not have company websites or social media profiles. From the consumer perspective, the colour of product packaging is the most visible differentiator between the three companies (alongside the 'II', 'III' or 'IV' indicating each company's code).⁹

⁹ See approved packaging design at: <https://ircca.gub.uy/vias-de-acceso/precio-del-cannabis-de-uso-adulto-dispensado-en-farmacias/> (Accessed 14 February 2024).

IRCCA's research suggests that consumers tend to have preferred producers, which—in the absence of price differences—indicates that some quality differences can be attributed to distinct cultivation and processing techniques.

4. RETAIL SALES OF CANNABIS THROUGH PHARMACIES: A NEW REVENUE STREAM FOR COMMUNITY PHARMACIES

Pharmacies may be seen as well-placed to sell cannabis, as staff already have experience with dispensing highly regulated products. However, pharmacies are ultimately for-profit businesses that also sell a range of non-medical items such as cosmetics, personal care, and hygiene products. Only pharmacies that register with IRCCA are authorised to sell cannabis. As of early 2024, 38 pharmacies (out of approximately 1000 community pharmacies in Uruguay ([Ministry of Economy and Finance, 2021](#))) were registered points of cannabis sale, of which 40% (n = 15) were located in the capital city Montevideo. While Montevideo is the biggest city in Uruguay (with 40% of the country population), the geographically uneven distribution of cannabis points of sale, and particularly their absence in the internal parts of the country (there are no cannabis point of sale pharmacies in 8 out of 19 administrative departments) have been among the biggest challenges during the implementation of this supply channel.

Earlier analyses of Uruguayan cannabis legislation identify several reasons for pharmacists' concerns related to selling cannabis; fears around retaliation from the illegal market, negative reputational impacts, ideological resistance to selling non-medical cannabis through pharmacies, and concerns over potential loss of clients ([El Observador, 2015](#); [Queirolo, 2020](#); [Wang, 2014](#)). These initial concerns appear to have been alleviated to some extent. There have been no reports of robberies or other incidents related to the sale of cannabis in pharmacies, and public support for cannabis legislation and community acceptance of legal cannabis consumers have increased ([CIFRA, 2022](#); [Queirolo, Repetto, Sotto and Álvarez, 2023](#)). As of early 2024, there is a waitlist of approximately 20–30 pharmacists wanting to register as cannabis points of sale.¹⁰

The expenses incurred by pharmacist on joining the cannabis retail system are limited. Computer software and fingerprint scanners (i.e., customers are required to scan their fingerprints before a transaction, a system implemented to enforce the 10-gram weekly purchase limit) are supplied by IRCCA at no cost. Minor expenses may include purchasing a new storage locker, a computer upgrade, or hiring an additional staff member to manage the increased customer flow.

Using cannabis sales volume in 2023 ([IRCCA, 2024a](#)) we estimate that cannabis retail transactions generated from 1.1 to 2.2 million USD in annual gross sales for the point-of-sale pharmacies (i.e., 15%–30% × 7.4 million USD market revenue). This calculation is based on the insights from interviews with pharmacists who estimated that they retain between 15% to 30% of the retail product price (average estimate: 21%, see [Figure 3](#)), consistent with previous media reports ([Maybin, 2019](#)). On average, each cannabis point-of-sale pharmacy would generate annual gross sales revenue of approximately 40,690 USD (=37,167 Euro) (21% × 7.4 million USD cannabis market revenue / 38 pharmacy points of sale). We note that this represents gross revenue (not *net* profits), and that sales vary greatly across pharmacies. For example, a couple of pharmacists we spoke to (one in Montevideo and another in an internal district bordering with Argentina) estimated that most of their revenue now comes from cannabis sales. However, during our visits to pharmacies registered as points-of-sale, it was evident that some pharmacies processed more cannabis transactions than others, and bulk product purchases varied between individual pharmacies.

An online system maintained by IRCCA is used to manage product purchase orders (i.e., pharmacies purchase cannabis cultivated by licensed producers through IRCCA), and the system also allows the government to monitor retail transactions in real time. In the recent context of supply shortages, bulk orders by individual pharmacies are being capped by IRCCA to ensure distribution of products across the retail network, with quotas based on pharmacy location and past sales volumes.

Under the advertising ban, pharmacies are not able to promote themselves as cannabis dispensaries. Instead, a notice in the window or a neutral banner may be used to inform

¹⁰ Due to supply shortages, extensions to the cannabis retail network have been temporarily paused at the time of our research (early 2024). As of May 2025, there were 42 licensed pharmacy points-of-sale.

customers they are part of the IRCCA cannabis retail network. We found that displaying this information in the pharmacy window was not a uniform practice, and some pharmacies leave it entirely up to potential customers to learn whether cannabis is sold at the premises (some registered pharmacies are listed on the IRCCA website).

With product offering, prices, and pharmacy purchase volumes controlled by IRCCA, there are only a few ways in which pharmacies can differentiate themselves. One of a few decisions pharmacies can make independently of IRCCA concerns hours of selling cannabis products. Some pharmacies sell cannabis throughout their opening hours (technically 24-hour cannabis sales are possible as there are no restrictions on cannabis retail hours imposed by law), while others limit cannabis sales to certain times. We also found that some pharmacists manage closed social media communications channels (e.g., WhatsApp groups) to stay connected with regular cannabis purchasers and inform them of product delivery dates, perhaps illustrating some attempts to cultivate relationships with regular clients. Overall, however, service seems to be largely uniform across cannabis dispensing pharmacies, with only a few exceptions. In Montevideo, for example, one pharmacist has taken the initiative of creating a website allowing customers to book a time for product pick-up, with several other pharmacies now signed up and offering this service.¹¹

A major challenge for the pharmacy retail sector in Uruguay relates to the US federal prohibition on the involvement of American banks with institutions that trade in cannabis. Due to the international trade between American and Uruguayan financial sector, domestic banks have denied services to cannabis-related businesses, including pharmacies registered with IRCCA (Barry, 2023; Hudak et al., 2019). This has had significant implications for cannabis points-of-sale, who now only accept cash for cannabis retail transactions. Pharmacies also use a non-bank payment system to deposit money for bulk purchase orders to IRCCA accounts. This roadblock has reportedly discouraged major international pharmacy chains operating in Uruguay from entering the cannabis market.

REFLECTIONS ON THE LEGAL CANNABIS MARKET AND ECONOMIC JUSTICE IN URUGUAY

The framework designed for cannabis legalisation in Uruguay is not intended to achieve any commercial objectives, but rather to improve public safety, protect health and promote human rights. Nevertheless, a number of for-profit businesses (i.e., licensed cannabis cultivation companies and pharmacies) and not-for-profit CSC associations are managing their operations to generate revenues from participation in the burgeoning legal cannabis market operating under this framework.

The licensed producers and pharmacy points of sale can make few entrepreneurial decisions as most market variables (prices, product types, potencies, production volume) are controlled by the government. These strict regulations have suppressed competitive behaviours between the for-profit actors. On the other hand, CSCs—although also limited to producing and selling cannabis flower—can decide on potency, strains and prices independently of IRCCA. CSCs are nonetheless limited by regulations controlling their size (caps to both the number of cultivated plants and enrolled members). In the analysis above, we estimated annual revenue from the regulated pharmacy-based cannabis market in 2023 at approximately 7.4 million USD (6.8 million Euro), comprising approximately 4–4.8 million USD (3.7–4.4 million Euro) revenue from the cannabis licensed production sector and 1.1–2.2 million USD (1–2 million Euro) revenue from the point-of-sale (pharmacy) retail sector. As we do not have data on their direct costs and overheads, we are not able to estimate the net profits of licensed producers and pharmacies. Our estimate of the CSC sector revenue (8–17.7 million USD) was comparatively higher. This is due to the much higher per unit price charged in CSCs, likely because of higher production costs as the clubs cannot operate at the same economies of scale as established licensed producers. Importantly, there are no shareholder dividends in the CSC sector, but a few key individuals may receive salaries as part of CSC governance structures.

Given the commercial opportunities identified under the strict state-controlled model implemented in Uruguay, it is necessary to reflect on the economic justice aspects of this

11 See: <https://reservarcannabis.com/>.

framework; Who are the main beneficiaries? How are the revenues and resources distributed in the new legal cannabis economy? Are there opportunities for market entry by less-resourced players, legacy market operators (i.e., those who produced or sold cannabis prior to the legalisation) and cannabis activists? In analysing this aspect, it is important to understand cannabis market structures (e.g., the number of players allowed to operate at different levels of the supply chain, and opportunities for vertically integrated operations) and the levels of revenue in different supply chains.

The licensed cultivation sector in Uruguay is characterised by a small number of companies cultivating on a large scale, supporting a 'commoditised' cannabis market where legal cannabis products are not differentiated by brand, quality, or sustainability of production (see: [Stoa \(2017\)](#)). IRCCA's decision to restrict the number of producers in the early years of implementing legal cannabis market, likely facilitated efficient enforcement and monitoring but hindered the inclusion of smaller businesses. The financial resources required to set up operations under the Uruguayan framework are an obvious barrier to entry for less-resourced individuals, small-scale legacy players, and cannabis activists. The industry stakeholders we spoke to came from business, accounting, agriculture, and other private sector backgrounds. With each company employing around 30–35 people (this estimate includes the management team), the local population benefits from some labour opportunities at the cultivation facilities. However, there are no formal incentives to encourage people with prior experience of the cannabis market or activism. At the retail level, without a pathway for co-operative shops or dispensaries, pharmacy owners are likely the main beneficiaries profiting from legal cannabis sales.

The CSC sector has lower entry barriers for those interested in setting up this type of outlet, and naturally attracts people with prior experience of cannabis consumption, cultivation, and activism. However, the clubs must operate within the not-for-profit civil association framework in managing their resources. This means operations are run based on the voluntary work of members, or only a few key employed individuals who benefit financially. The relative popularity of CSCs (there were over 350 legal CSCs with over 12,000 members as of early 2024) has contributed to the emergence of a new consulting sector providing advice on how to establish and manage clubs, although this seems to be limited to a few specialist lawyers and activists. We note that the CSC sector was never designed to generate revenue or create paid employment opportunities. Alongside home-growing, the CSC supply chain was included in the Uruguayan cannabis reform as a social justice measure, in direct response to calls from civil society, including local and overseas activists ([Queirolo et al., 2016](#)). Perhaps the lack of a clear pathway for including cannabis community or small-scale enterprises in the economic aspects of reform has contributed to a situation where some clubs operate like quasi-dispensaries.

In Uruguay, individuals with a prior criminal record for cannabis-related offences are not excluded from entering the legal cannabis market – either by registering as users (i.e., home-growers, CSC members, or pharmacy buyers), or taking an active role in the legal market (i.e., by setting up a CSC, working as a gardener for a CSC, applying for a producing license, working at a producing plant, or joining the pharmacy distribution scheme). This creates opportunities for integrating legacy actors and individuals with prior contact with the criminal justice system, an important consideration from a social justice and equity perspective. To our knowledge, research to date has not analysed the experiences, if any, of such actors in the Uruguayan market.

With regard to market structure, there appears to be no single dominant business or private actor, and to date the framework has successfully protected the market from corporate dominance whilst allowing several businesses and not-for-profit associations to co-exist. The separation of licensed production from pharmacy points-of-sale (i.e., there is no vertical integration between licensed producers and retail points of sale) and legal limitations on the size of CSCs may have contributed to this situation. However, with ongoing maturation of the market, it will be interesting to monitor the dynamics between different actors and sectors. For example, it is possible that with an increased pharmacy offering (in October 2024, a fourth product type named 'Épsilon' with a more potent strain [up to 20% THC and up to 1 % CBD] was made available via pharmacies), some registered consumers may shift across different supply chains. It appears that this phenomenon has not been observed on a large scale to date, with all three legal supply channels (i.e., home-growing, pharmacy-supply and CSCs) experiencing growth in consumer registrations to date ([IRCCA, 2023a](#)).

To conclude, our analysis suggests that legal cannabis market regulation in Uruguay may represent a compromise from an economic and social justice perspective. On the one hand, the legal framework has protected the market from corporate dominance, whilst allowing several for-profit and not-for-profit actors to co-exist. The legal framework also allows, at least in theory, individuals with prior criminal records for cannabis-related offenses to participate in the legal market. On the other hand, limitations in terms of economic justice opportunities remain, particularly for small-scale cannabis producers.

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The authors have no competing interests to declare.


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All authors have contributed to the conceptualisation and writing of the manuscript, and reviewed and approved its final version. MR - conceptualisation, writing, review and editing; MP - conceptualisation, writing, review and editing; RQ - conceptualisation, review, and editing.

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