

# Germany's cannabis act: a catalyst for European drug policy reform?



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## Summary

With the enforcement of the Cannabis Act on 1 April 2024, Germany has adopted one of the most liberal legal approaches to cannabis on the continent. The German model prioritises a non-profit approach and precludes legal market mechanisms. We believe these are the main drivers for increasing cannabis use and related health problems, based on observations following cannabis legalisation in Canada and many states in the U.S. Although legalising cannabis possession and cultivation may not immediately eliminate the illegal market, it is expected to serve public health goals. Despite the overall positive evaluation of the Cannabis Act in Germany, there are three potential areas of concern: the potential for misuse of the medical system, the normalization of cannabis use, and the influence of the cannabis industry. The German model may herald the beginning of a new generation of European cannabis policies, but concerted efforts will be required to ensure that these policy reforms serve rather than undermine public health goals.

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## Introduction

After legalising cannabis flowers for medical purposes in 2017, the German parliament passed the Cannabis Act ('Cannabisgesetz' or CanG<sup>1</sup>) on February 23, 2024, thus legalising the possession and cultivation for recreational purposes. While Germany is not the first European country to reform their cannabis policy, given its size and political importance we expect this day to be a major milestone for a new generation of European cannabis policies.

In this viewpoint, we: (1) outline the political process that led to the final bill; (2) describe the proposed legislation; (3) compare the proposed legislation to regulation models implemented in other European and non-European countries; (4) anticipate the public health impact based the empirical evidence concerning

cannabis regulation from Canada, Uruguay, and US states. Lastly, we outline three major risks of the Cannabis Act that may undermine public health goals.

## How Germany came to legalise cannabis for recreational purposes

In 2017, the prescribing of cannabis flowers for medical purposes by physicians was legalised in Germany. This decision followed a court ruling directing the federal government to reform the previous process, which required patients to undergo a year-long legal process to obtain permission for its use.

In 2021, the federal parliamentary election resulted in a coalition government of three parties that had never before ruled together at the federal level: the Social Democratic Party (SPD), the Green Party (GREENS) and the Free Democratic Party (FDP). While all three parties promised to liberalise cannabis laws before the election, only the GREENS and FDP explicitly aimed to form a legal market. The SPD advocated for scientific pilot projects to assess the effects of legal cannabis access

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before committing to further steps. However, while forming the coalition government, the constituting parties agreed to “introduce the controlled supply of cannabis to adults for recreational purposes in licenced shops.”<sup>2</sup> The main reasons given for cannabis reform was to protect minors, to prevent the distribution of contaminated products, and to ensure quality standards.

In October of 2022, the Ministry of Health outlined the core pillars of a new cannabis policy in a White Paper.<sup>3</sup> Accordingly, cannabis and tetrahydrocannabinol (THC) were to be rescheduled as drugs no longer covered by narcotics law, allowing possession of up to 20–30 g cannabis as well as home cultivation for personal purposes. The commercial production and distribution to adults aged 18 or over was to be legalised under a licence-based model. The introduction of a cannabis tax was planned, alongside a comprehensive ban on marketing.

This policy reform plan was subsequently discussed with the European Commission. Since the commercial production and trade of cannabis for recreational purposes might have violated international and European treaties, the initial plan was abandoned and replaced by a two-step program.<sup>4</sup> Published in April of 2023, that two-step program involved: (1) legalising cannabis possession and cultivation and (2) legalising commercial production and distribution models as part of scientific pilot projects, with certain regional and time constraints in place. While the first step was approved by parliament on February 23, 2024—and will be in effect on April 1, 2024—it remains uncertain whether the second step will be realized at all. We will therefore focus on the first step in the following.

## The German model of recreational cannabis legalisation

The approved Cannabis Act reschedules cannabis from narcotic drug classification and allows the personal but not commercial handling of that substance.<sup>1</sup> As detailed in Table 1, possessing cannabis will be legal for adults 18 year or older with certain constraints. Importantly, there will be two options for adults to legally acquire cannabis: through home cultivation or by joining a so-called ‘cannabis club’. These privately-run clubs are legally required to operate on a non-profit basis and adopt a distribution model that has been used in some European countries and in Uruguay for several years (see e.g.,<sup>5</sup>). In each cannabis club, one member will be trained in prevention activities and will facilitate access to counselling and therapy options for other members. Compared to commercial for-profit production and distribution models, cannabis clubs in Germany have caps on their membership size and thus their production capacities, will not levy value-added or excise taxes on their products, and must not levy charges for their distributed products. Moreover, minimum distance

rules (zoning laws) will likely result in very few cannabis clubs receiving licences in urban regions, resulting in a natural cap on the density of these clubs. Technically, cannabis will not be sold in the clubs but will be distributed among members against membership fees. While there are no limits on the THC concentration in cannabis produced privately or collectively, the production of THC extracts (e.g., oil or other concentrates) is prohibited. However, possession of THC extracts or edibles is not explicitly regulated.

With about 70 pages of text, the Cannabis Act is a very complex document and limits our confidence in the real-world impact of this policy reform. While the interpretation of some legal details will likely be subject to future court decisions, we outline what we anticipate the real-world impact of the Cannabis Act to be.

## Benchmarking the German model to other countries’ regulations and experiences

In the absence of comparable equivalent cannabis policy scales, we narratively compare the regulations to those implemented elsewhere. Clearly, the German model takes a more liberal stance on cannabis use than most, if not all, European countries. A notable exception may be the Netherlands, where adults can buy cannabis in designated shops, but these are only tolerated (not legally regulated) and the supply chain relies entirely on illicit sources.

In no other European country is personal possession legal, but in Switzerland pilot projects currently evaluate the effects of legal access to cannabis for recreational purposes in select jurisdictions. In several European countries, such as Czechia, the Netherlands, Spain, and Portugal, cannabis possession has been de facto or de jure decriminalized. However, administrative fees may be levied for possession of even small amounts. In Portugal, possession can also result in referrals to drug counselling or treatment. In Europe, there are only two other countries that have formally legalised home cultivation. While in the Netherlands, growing up to five cannabis plants will not be prosecuted (not formally legalised),<sup>6</sup> Malta and Luxembourg allow for up to four plants per household or adult, respectively.<sup>7,8</sup> Thus, Germany has adopted the regulations of other countries with regard to home cultivation. The collective cultivation in cannabis clubs, however, is formally legalised only in Malta, with the first legal club opened in January of 2024,<sup>9</sup> while in other European countries, clubs are operating mostly illegally or in a grey zone.<sup>10</sup> Overall, with the Cannabis Act, Germany has possibly adopted the most liberal cannabis policy on the continent.

How does the German model compare to the regulations in place in Canada, Uruguay, or in the US? The Uruguayan model is similar to the German model yet people using cannabis are required to register with a federal agency in order to legally acquire cannabis from

Domain	Allowance	Uncertainties
Personal possession	<ul style="list-style-type: none"> <li>• 25 g of cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• No regulation on possession of specific products, particularly concentrates</li> </ul>
Home-cultivation	<ul style="list-style-type: none"> <li>• Three living cannabis plants</li> <li>• Harvest must not be shared with others</li> </ul>	<ul style="list-style-type: none"> <li>• Harvest of three plants can easily exceed legal possession limits</li> </ul>
Collective cultivation as part of a licenced and non-profit "cannabis club"	<ul style="list-style-type: none"> <li>• Up to 500 members per club</li> <li>• No on-premise consumption</li> <li>• No club within 200 m of schools, kindergartens, playgrounds</li> <li>• Daily limit: 25 g</li> <li>• Minimum age: 18 years</li> <li>• Monthly limit: 30 g for 18–20-year-olds; 50 g for those 21 years or older</li> <li>• THC limit: 10% for 18–20-year-olds</li> <li>• Distribution in neutral packaging with health warnings and THC/CBD-concentration</li> <li>• Delivery, marketing and sponsoring not allowed</li> <li>• Sharing of cannabis with non-members/third persons prohibited</li> </ul>	<ul style="list-style-type: none"> <li>• No regulation on the number of plants</li> <li>• Monthly limit exceeds legal possession limits</li> </ul>

**Table 1: Legal provisions of the Cannabis Act for adults (18 year or older).**

home cultivation, cannabis clubs, or selected pharmacies. Compared to the North American regulation models, the German model does not allow for any commercial retailers, either in the form of brick-and-mortar stores or online delivery options. Thus, in terms of international legalisation efforts, the German model appears to be quite restrictive.

### The expected impact of the German model based on empirical evidence

In a systematic review of 164 studies conducted to inform German policy-makers in drafting the Cannabis Act, we assessed the impact of legalising cannabis for recreational purposes.<sup>11</sup> Summarising the empirical evidence from Canada, the US states, and Uruguay, we found that cannabis legalisation might serve as a catalyst in accelerating the rising trend in the prevalence of cannabis use. This effect was particularly evident in controlled study designs that involved time periods of at least two years following the law's implementation.<sup>12–14</sup> Parallel to the increase in cannabis use, we also found indications for increases in acute (e.g., intoxications, injuries) and chronic (e.g., cannabis use disorder) health harms attributable to cannabis use linked to the legalisation of cannabis for recreational purposes.<sup>15–17</sup>

While acknowledging the uncertainties in observational study designs, we propose that the main causal mechanism leading to increasing use and health problems lies in legal market dynamics. Specifically, we identify three core pathways: (1) the increasing availability of cannabis, e.g., through a high-density network of retailers, in particular in jurisdictions with private distribution models,<sup>18</sup> or through online delivery options<sup>19</sup>; (2) the falling retail prices of cannabis in both legal<sup>20</sup> and illegal markets,<sup>21</sup> making a standard dose much more affordable; 3) the supply of new, innovative products that are attractive for people who did not use

cannabis before (e.g., edibles, tinctures) or that allow for a much higher intake of THC than through traditional means of consumption (concentrates, vapes; see<sup>22</sup>).

The importance of cannabis market dynamics for public health is consistent with experiences gained from the regulation of alcohol (see e.g., sales monopoly<sup>23</sup>.) and there is also direct empirical evidence supporting our assertion. In Ontario, Canada, the relaxation of a cap on retail licences has not only resulted in a surge in retail shops but also in an increase in acute and chronic cannabis harms.<sup>16,24</sup> In a separate systematic review, we demonstrated that the increasing prevalence of cannabis use is likely concentrated among people living close to retailers or living in areas with a high density of retailers.<sup>25</sup> In fact, the high concentration of legal cannabis retailers is expected to result in high competition, which could explain the falling retail prices observed on legal markets.<sup>26</sup> Lastly, emerging evidence shows that marketing exposure, driven by a surge of legal cannabis retail shops and insufficient enforcement of the marketing ban,<sup>27</sup> is linked to elevated intentions to using cannabis among adolescents.<sup>28</sup>

Assuming that market factors, such as availability, affordability, and new products are more important drivers for substance use and attributable harm than the legal status, we can conclude that the German non-profit model with a low density of cannabis clubs will be more effective in protecting public health than the North American more commercial models. Accordingly, we expect that the Cannabis Act will not have a substantial impact on the rising trend in the prevalence of cannabis use in Germany.<sup>29</sup> Similarly, we do not expect that the demand for illegal cannabis will drop substantially within a foreseeable period of time. In Canada, with legal commercial retailers offering various cannabis products at low cost, it took several years before a majority of users switched to the legal market.<sup>30</sup>

Importantly, we need to stress that substance use is not entirely determined by the substance's legal status or even by market factors. Prevalence estimates since 1995 show that cannabis use has gained and lost its appeal over time (first temporary peak in 2003<sup>29</sup>;) without any meaningful changes in the regulation of cannabis during that period. Since 2009, cannabis use has increased not only in Germany, but also in many European countries, including France and the Netherlands.<sup>31</sup> Interestingly, the prevalence of cannabis use in France is among the highest in European countries, despite pursuing a very repressive approach involving the charging of large fines.<sup>32</sup> In contrast, the Netherlands have pursued a very liberal approach to cannabis for decades but have seen cannabis use prevalence below the French benchmark.<sup>31</sup> Overall, it appears that social norms or, more generally, cultural factors, appear to be more important in explaining trends in cannabis use than regulations such as the Cannabis Act.

While we do not anticipate that the Cannabis Act will have any major immediate adverse consequences for public health, we do expect benefits for individuals using cannabis, in particular with respect to legal matters. In 2021, about 150,000 people were registered as having violated the narcotics law by possessing minor amounts of cannabis for personal possession—a 65% increase compared to 2009.<sup>33</sup> Drawing on experiences from other legalising jurisdictions, we hope for a reduction in these legal consequences, and for a minimisation of possible racial disparities noted in those charged with such offenses.<sup>34</sup> With their focus on quality control, prevention and treatment referral, cannabis clubs may provide additional health benefits.

Despite the overall positive evaluation of the Cannabis Act, we do anticipate three major risks of the German model.

## **Risk #1: the rising misuse of medical cannabis for recreational purposes**

Since 2017, the prescription of medical cannabis has increased steadily. Annual domestic production of medical cannabis flower was capped at 10,400 kg. However, imports of medical cannabis flower have risen steadily, from 530 kg in the first three quarters in 2017 to 14,315 kg in the first three quarters of 2023.<sup>35</sup> Reliable data are still lacking, but it is conceivable that the growing demand for medical cannabis is to some degree driven by people using the drug exclusively or partially for recreational purposes.

The Cannabis Act will affect the medical realm as it will reschedule cannabis as a drug separated from drugs covered by the narcotics law and thereby ease prescription rules. The current constraints on domestic production will be replaced by a rather liberal market. Thus far, three companies have been contracted by the government to produce a fixed amount of cannabis flower

to be sold to, and distributed by, the regulating agency, regardless of the actual demand. With the Cannabis Act, new licences will be issued for domestic production and distribution, thereby liberalising the market, increasing competition, and possibly strengthening the industry (see also Risk #3).

In April 2024, there are more than 400 different types of cannabis flower available for prescription, in addition to various concentrates.<sup>36</sup> We have scanned one online dispensary and found that cannabis flowers usually contain 20% THC or more and are mostly sold at prices between 7 and 12 €. In our view, people who are interested in easy access to quality-controlled cannabis flower or concentrates specifically, may choose to obtain a medical prescription and get their choice of cannabis delivered to their home rather than engaging in private or collective cultivation. The hypothesized increase in demand is confirmed by Google search trends (number of searches for “cannabis rezept”: February: n = 44; March: n = 162; April 1 to 20: n = 1.052) and social media observations.

In light of these considerations, it appears plausible that medical cannabis will become the third legal source—in addition to home and collective cultivation. The extent of medical cannabis sourcing will largely depend on the willingness of physicians to prescribe cannabis, which can theoretically be given for any physical or mental condition, regardless of any available evidence on its effectiveness. To date, physicians in Germany appear to be rather reluctant to prescribe cannabis, but some online-based ‘agents’, offering prescriptions for medical cannabis following a brief consultation, already exist, allowing patients to receive their cannabis via home delivery. Considering the increasing demand for medical cannabis as well as the liberalised production, distribution, and prescription rules, an expansion of this business model also appears plausible. While access to medical cannabis by people using it for recreational purposes may primarily replace illegal demand, there is some risk that it could incentivise consumption and be detrimental for public health.<sup>37</sup>

## **Risk #2: the fallout of an ongoing normalization of cannabis use**

Legalising cannabis use is bound to normalize its consumption, with possible positive and negative consequences that need to be considered. By removing the punishment, structural stigmatization is removed, and it can also facilitate a reduction in the public and internalised stigma of cannabis use. While this outcome is desirable and well accepted among both legalisation opponents and advocates, the latter often argue that the de-stigmatization can improve treatment-seeking behaviour and thus improve public health. We have some doubts regarding this argument. First, the

destigmatization of cannabis use may not extend to cannabis use disorder. Empirical data from the US show that the demand for treatment of cannabis use disorders is on the decline—in parallel to decreasing risk perception—and legalisation does not, in fact, reverse this trend.<sup>38</sup> In Germany, about one in five people registered for outpatient addiction care services are currently referred to treatment by police.<sup>39</sup> The Cannabis Act will certainly lower the number of legal referrals and while not all of those were in need of treatment, some of them were, and have likely benefited from the referral. Clearly, coerced treatment should be abolished, but we should acknowledge the risk that a legalisation, including normalization of use, may result in lower—not higher—treatment uptake. To further illustrate our point, we can look to perhaps the most-normalized drug on our continent: alcohol. For alcohol use disorder, the lowest treatment coverage rates recorded suggest that only 20% of people with alcohol use disorder seek professional help,<sup>40</sup> while this rate is at 50% or higher for people with depression.<sup>41</sup>

We want to sketch out one possible route by which the ongoing normalisation of cannabis use in Germany could be facilitated by the Cannabis Act. The Cannabis Act only restricts public consumption close to schools, playgrounds, and kindergartens, but we expect that cannabis use in public will still become a more common sight. Wherever tobacco smoking is allowed, people may in future also smoke cannabis. This may not only concern bars, restaurants, or dance venues but also bus stops, train stations, or shopping areas—due to relatively weak tobacco control legislation in Germany.<sup>42</sup> Moreover, it will be legal to open and run restaurants or bars dedicated to the use of cannabis. In such ‘cannabis cafés’, people can bring their own cannabis for personal consumption and socialize—similar to the Dutch coffeeshop model but without sales. Based on our interpretations of the Cannabis Act, ‘cannabis cafés’ would not be affected by the marketing ban, so they would be allowed to use storefront marketing and could even sponsor the local soccer team. Using the fictional but realistic example of ‘cannabis cafés’, we would like to illustrate how there could be unintended and unpredictable implications of the Cannabis Act that accelerate the normalisation of cannabis use in German society and contribute to increases in the initiation of cannabis use among both youth and adults.

### Risk #3: the growing influence of cannabis industry

The Cannabis Act does not allow a commercial distribution model, but there is a vocal cannabis industry that publicly engages with policy makers and increasingly dominates the discussion on regulation best practices. For instance, various industry stakeholders were invited to the parliamentary hearing on the Cannabis Act (see

list of participants<sup>43</sup>). While the involvement of industry stakeholders in parliamentary processes may not constitute a problem per se, we begin to see a shift in the public discussion driven by industry arguments. As observed in Canada, the industry effectively lobbies for a dismantling of regulations (e.g., lower taxes, removal of marketing bans) arguing that they hold the key to the effective displacement of illegal retailers.<sup>44</sup> Certainly, a shrinking illegal market is of interest for public health, but we must stress that a strong legal market carries its own risk.

The commercial for-profit production and distribution of cannabis is not only considered to constitute a key mechanism responsible for increased cannabis use prevalence (see **The expected impact of the German model based on empirical evidence**), it is also bound to change the market and consumption practices entirely. On a largely decentralised illegal market, competition was only important locally and there was little incentive or capacity to invest in research and development. In a legal market, however, a small number of companies can produce large amounts of cannabis at much lower costs than any illegal producer would be capable of. Moreover, the heavy competition can lead to innovative new products with increasingly high THC levels. While the average THC concentration has gone up in European countries in the past decade, flowers and resin remain the preferred products by a large margin, with average THC concentrations estimated at 11% and 24% in 2019, respectively.<sup>31</sup> In contrast, the Ontario Cannabis Store reports that the vast majority of products sold both online and in retail stores contain more than 20% THC.<sup>45</sup> Cannabis vapes may facilitate the transition to less harmful modes of administration, which appears to be urgently required given that about nine in 10 persons smoke cannabis together with tobacco.<sup>46</sup> However, as vaping usually results in higher absolute THC intake than smoking, the legal market may displace the illegal market partly at the cost of public health.<sup>47</sup> Despite the ban of cannabinoid extraction by the Cannabis Act, we would not be surprised if cannabis extracts were slowly but surely entering the market, either legally, through a loophole in the Cannabis Act, or illegally.

The discussion on the displacement of an ineffective, illegal market by an effective, legal market serves to illustrate that a growing cannabis industry in the largest European Union member state can weaken any future regulation and thus have adverse consequences for public health.

### Conclusion

Germany attempts to legalise cannabis in a two-step approach. Effective from April 1, 2024, as a first step the Cannabis Act legalises the possession as well as home- and collective cultivation of cannabis for adults. The German model does not seem to have the market

dynamics that are presumably responsible for the increased uptake of cannabis observed in North America, and we therefore do not expect the Cannabis Act to result in any major adverse consequences for public health in Germany. There are, however, three major risks that pertain to: (1) the possible misuse of the medical dispensary system, (2) the fallout of an ongoing normalization of cannabis, and (3) the growing influence of the cannabis industry.

Since Germany is the most populous and economically largest member state in the European Union, its model is expected to gain the attention of other member states. We also expect more rigorous empirical investigation of the effects of legalisation in Germany over other European models (e.g., Malta or Luxembourg), resulting in greater confidence to copy the model. If the German model meets our expectations, it will be an attractive policy option for European countries seeking to reform their cannabis laws. In fact, Czechia has already expressed interest in the German model after decriminalizing cannabis use not long ago.<sup>48</sup> Accordingly, we believe that the Cannabis Act signifies the dawn of a new era for cannabis policy in Europe.

With the Cannabis Act, Germany has stepped up as the current leader in reforming cannabis policy in Europe. The German model as it exists today relies on a non-profit distribution system that will not effectively displace but reduce the illegal market. However, the impact of the Cannabis Act may only become clear in a few years. This will depend on how the reforms are implemented in each federal state and any potential political resistance or local issues. We anticipate that a commercial distribution model will be legalised in some European countries by the end of the decade, either by altering European treaties or by implementation of large-scale research projects proposed in Germany as the second step in cannabis legalisation. Against this backdrop, concerted efforts are needed to investigate the causal pathways between policy reforms, market mechanisms, cannabis use, and health consequences. Only with a detailed understanding of these pathways will we be able to derive precise, evidence-based recommendations for a legal commercial distribution model that serves public health.

#### Contributors

Conceptualization: JM; Investigation: all authors; Writing—Original Draft: JM; Writing—Review & Editing: all authors.

#### Declaration of interests

Unrelated to the present work, JM has worked as consultant and received honoraria from various public health organizations (World Health Organization, European Monitoring Centre for Drugs and Drug Addiction, national non-governmental organisations) and has received payment for expert testimony in the German parliament. Moreover, all authors were involved in a research project on potential outcomes of cannabis legalisation based on empirical evidence from other countries funded by the German Ministry of Health.

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#### Appendix A. Supplementary data

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