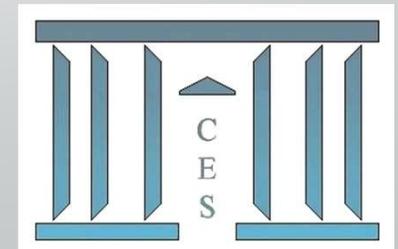


# In between recreational and medical cannabis supply model: the Cannabis Club as a potential buffer against market distortions?

Addictions 2019: Issues for Cannabis Policy

24 October 2019

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# OVERVIEW

## Background

- Issue with medical cannabis in Europe
- Sin taxes are distortionary but necessary

## Cannabis Social Clubs

- How can they complement pharmacies and retail stores?

## Conclusion

- Economic efficiency & harm reduction

# BACKGROUND

The first fully legal markets in the US have demonstrated that a commercial model might conflict with policy goals:

1. Perverse relation between for-profit motive and heavy consumers (Caulkins et al., 2017)
  - ↑↑↑ market share of high THC product
2. Slow reduction of the black market
  - High cost of entry for illicit suppliers
3. Interrelation between medical and recreational market
  - Can you always identify medical users?

# Drugs policy in Germany is a mess

*Despite legalisation, medicinal cannabis is often unavailable to German patients*



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# MEDICAL CANNABIS PRESCRIPTIONS IN GERMANY



# PROBLEMS IN GERMANY

- Demand >> supply
  - Many potential patients wait for the product availability to get a physician's prescription
- Over-the-counter cost is more than many people can afford
  - Almost twice as expensive as the illicit market
- Physician decides as a last resort treatment

# LIMITED COVERAGE OF THE NATIONAL HEALTHCARE SYSTEM

- Approval of the insurance company need to be given before the start of delivery
  - Health insurers in Germany decline a third of requests for reimbursement
- In Italy, only four types of specialists are allowed to prescribe cannabis treatment valid for reimbursement
- Herbal cannabis with full entourage effect unavailable to European patients (Hazekamp, 2016; Worth, 2019)
  - Only irradiated pharma-grade herbal cannabis or pharmaceuticals

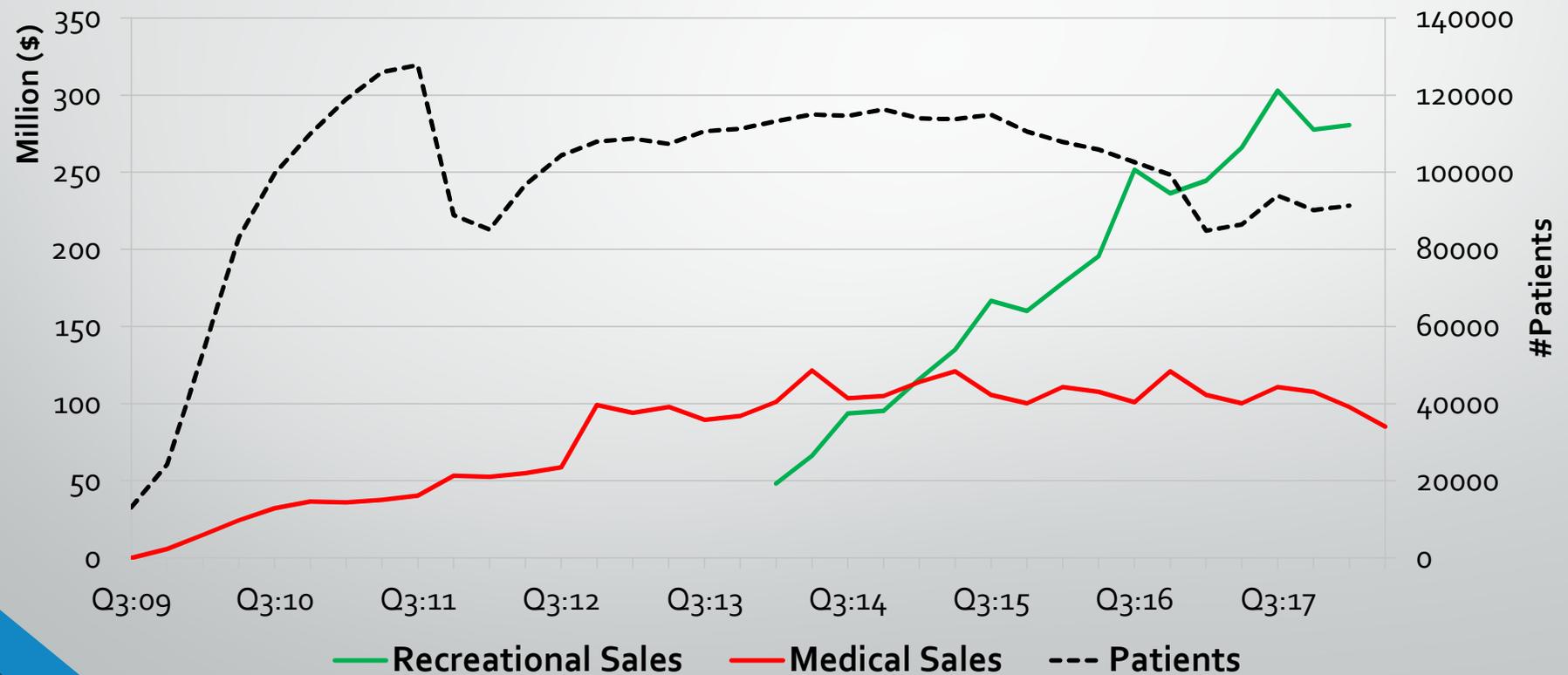
# **THE ELEPHANT IN THE ROOM: DO EUROPEAN POLICYMAKERS FEAR MEDICAL CANNABIS WILL NOT BE USED FOR MEDICAL PURPOSES?**



# DISTORTIONS WITH MEDICAL CANNABIS

- There is **interrelation** between medical and recreational cannabis users in those supply architecture which separate the markets (Asplund & Fortin, 2017; Pacula et al., 2016).
- Only-medical cannabis regulation:
  - Product safety is preferred by any type of users
- Full legalization:
  - If medical cannabis is cheaper than the cannabis bought from recreational outlets, there will a diversion to non-medical user
  - The over-consumption of medical cannabis will be proportional price difference

# MEDICAL VS RECREATIONAL MARKET IN COLORADO



Source: Asplund & Fortin (2017)

# SIN TAX ON RECREATIONAL USE

- A form of sin tax is considered appropriate for the non-medical use of harmful goods.
- Each American state with full legalization have set a higher taxation on recreational use
- Canada & Uruguay DO NOT differentiate between medical and recreational cannabis
  - This create another distortion as it imposes a sin tax on medical users

# SIZE OF THE DISTORTION

- In Colorado:
  - About 30% difference in taxation between rec and med market
  - Up to 10% distortion (Asplund & Fortin, 2018)
- In an European welfare state:
  - About 70% tax on recreation market (similar to tobacco)
  - Medical market subsidized
  - Distortion might be substantial
- How can we minimize both consumption distortions and solve both the economic and ethical issue?

# PURPOSE OF THEORETICAL MODEL

- Understanding the potential role of an additional non-profit supplier in a scenario which allows
  - Commercial stores
  - Healthcare through pharmacies
- Describe its dimension of attractiveness
  - Heavy non-medical users
  - Non-verifiable patients
  - Patients believing in the entourage effect
- Define the conditions under which clubs can reduce market distortions

MODELS	STRENGTH	WEAKNESS
<b>Commercial Model (US approach)</b>	<ul style="list-style-type: none"> <li>• Illicit market minimization through large product variety (and strains)</li> <li>• Innovation in production with positive externalities</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial interest would promote heavy use</li> <li>• Industry lobbying might prioritize producers' interests over consumers' interests</li> </ul>
<b>Medical model in Welfare state context (European approach)</b>	<ul style="list-style-type: none"> <li>• Treatment is monitored by physicians</li> <li>• It supports the cost of cannabis to patients</li> <li>• Availability of pharma-grade herbal cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• Waste of public funding when there is diversion to recreational users</li> <li>• Difficult access for patients suffering for condition for which there is no conclusive scientific evidence of safety and efficacy</li> <li>• Herbal cannabis without full entourage effect is unavailable</li> </ul>

# CANNABIS SOCIAL CLUBS

- The Cannabis Social Clubs (CSCs) collectively organize the cultivation and distribution for their members
  - Non-profit and user-driven model (Pardal, 2016)
  - Some CSCs exclusively serve medical users (Pardal & Bawin, 2018)
- Uruguay is the first country regulating Cannabis Clubs
  - Competing with a state-monopoly model
- Thus far, commercial and CSC supply models have operated as mutually exclusive

# CLUBS AS A THIRD SUPPLY CHANNEL

- Users would select themselves into one of the supply channels:
  - Pharmacies
  - Commercial outlets
  - Cannabis Club
- The model exploits the heterogeneity of consumers:
  - Quantity consumed (price elasticity of the demand)
  - Transaction Costs
    - Entrance fee (e.g., cost for physician's visit)
    - Preference for privacy
    - Preference for non-commercial supplier
  - Preference for products with full entourage effect

# THE MODEL

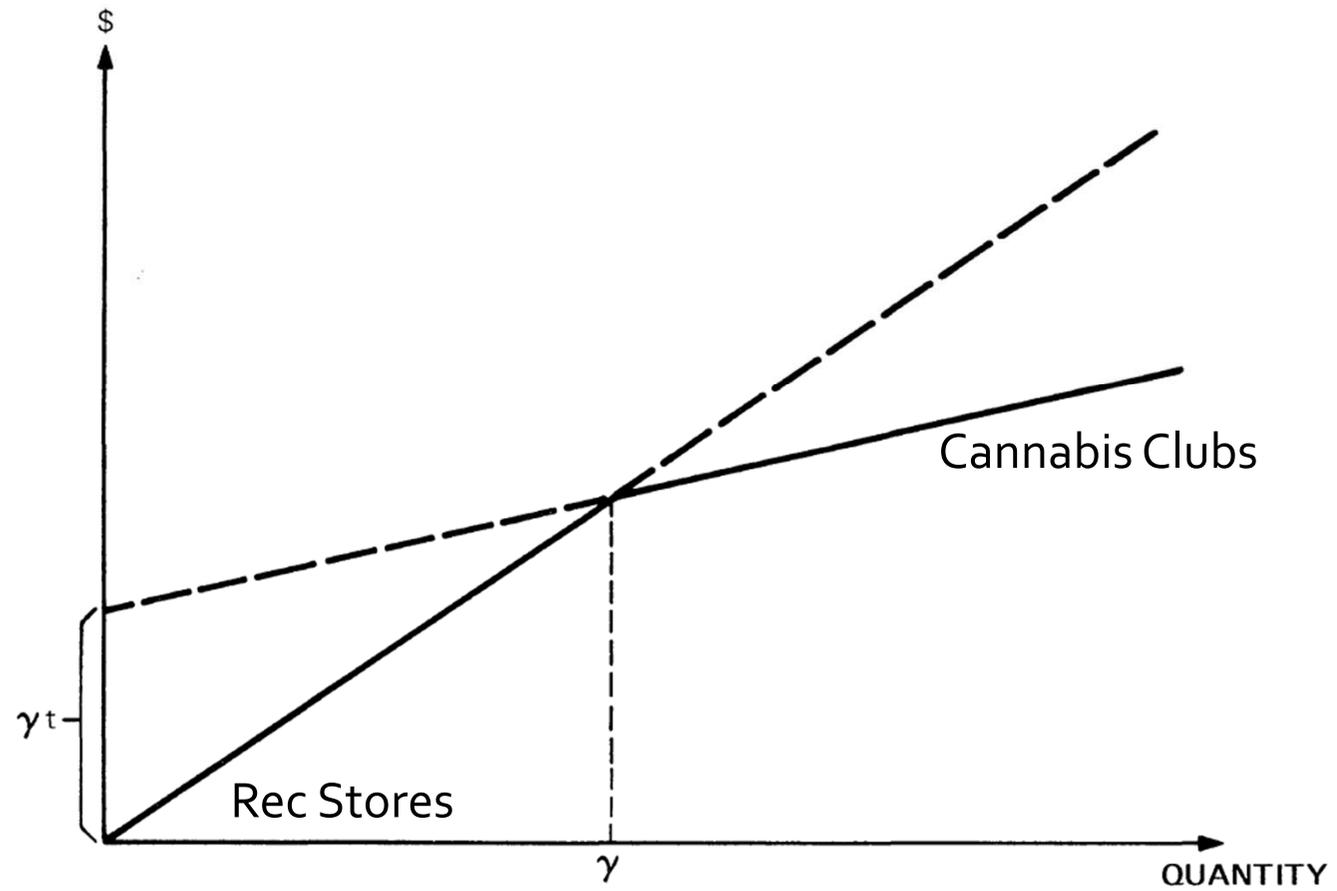
$$P^{MED} < P^{CSC} < P^{REC}$$

$$C_{ENTRY}^{MED} > C_{ENTRY}^{CSC} > C_{ENTRY}^{REC}$$

- Price
  - Cheaper price is in the medical market (subsidies or health coverage)
  - Lower price in Cannabis Clubs compared to recreational stores
- Entry Costs
  - CSC need to impose entry costs to avoid occasional non-medical users
  - No barriers to entry in recreational stores

FIGURE 2

CHOICE BETWEEN UNIFORM PRICE AND TWO-PART TARIFF



# WHO WOULD BE ATTRACTED BY CLUBS?

- Medical users who

- cannot obtain a prescription from their physician
- do not want to be registered in a centralized government authority
- prefer self-medication given their experience with the plant
- prefer products with full entourage effect

**Medical  
Market**

- Heavy non-medical users

- with high price-sensitivity
- Without privacy concern
- with preference for a non-profit environment

**Recreational  
Market**

# OPTIMAL SUPPLY MODEL

TYPE OF CONSUMERS	LEGAL SUPPLIER
PATIENTS <b>WITH</b> VERIFIABLE CONDITION	Healthcare
PATIENTS <b>WITHOUT</b> VERIFIABLE CONDITION	Healthcare or Cannabis Social Clubs
PATIENTS BELIEVING IN THE ENTOURAGE EFFECT	Cannabis Social Clubs
RECREATIONAL <b>HEAVY</b> USERS	Recreational Stores or Cannabis Social Clubs
TOURISTS & LIGHT USERS	Recreational Stores

## ADVANTAGES OF CSC



Economic Efficiency

Harm reduction

# ECONOMIC EFFICIENCY

- Increased market segmentation between medical and recreational users and minimization of consumption distortions such as:
  - Non-medical cannabis users purchasing at a subsidized price
  - Medical users paying a sin tax
- Saving of medical resources, such as doctor's time, due to the shift of non-verified patients towards the CSCs.
  - Increased fairness in the treatment costs for patients without prescription
- Increased tax revenues collected by the state given the larger fraction of heavy users in the legal sphere
  - Lower barrier for illicit cannabis dealers to enter the market

# HARM REDUCTION

- Reduction of perverse relation between heavy users and profit-oriented recreational cannabis industry without the need to fully ban commercial outlets.
- Better monitoring of the consumption of regular users through personal quota (form of nudging).
- Larger fraction of heavy users and patients in the legal sphere
  - Increase in the average product quality
  - Increased inclusivity of illicit cannabis dealer within the legal market
  - Increase of treatments available through herbal products with entourage effect
- Lobbying power of commercial model counterbalance by clubs interest

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