



Justifications for Liberal and Prohibitive Drug Strategies in the Presence of Market Failure

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Abstract for Master's thesis

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<p>Abstract: Finland has a restrictive drug policy that seeks to reduce drugs in society through criminalization and control. The Greens approved an initiative calling for the decriminalization of cannabis in September 2021. This thesis uses content analysis to compare and evaluate how these policies can be justified or denied. Rational addiction theory and behavioral economics are utilized to discuss the assumption of rational individuals in the context of drug use. The concepts of externalities and external costs are presented to evaluate the trade-off between positive and negative consequences of drug consumption on a theoretical level. The importance of societal attitudes for the results of my thesis was surprisingly significant, as a majority of the arguments used in the analysis culminated on prevailing opinions about cannabis consumption. As behavioral economics supports prohibitive legislation in correcting harmful behavior, the results are dependent on the societally prevailing definition of harmful behavior. Negative externalities compared the social costs and benefits created by cannabis consumption to find a socially optimal level to be aspired. These costs and benefits are not solely monetary, as some aspects can be derived from societal attitudes. Due to difficulties in quantifying and attaining the relevant information, this thesis found that the outcome of the trade-off between costs and benefits depends on individual's perceptions of the positive and negative consequences of cannabis use.</p>	
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1. Introduction

Cannabis has the highest cultivation, trafficking, and consumption rates among illicit drugs. According to the World Health Organization (2016), approximately 147 million people consume cannabis worldwide. Adverse health effects of cannabis use have been recognized for years and can be sub-categorized into two. Acute effects include, i.e., impaired cognitive development and psychomotor performance. Chronic health effects contain, i.e., more significant impairment of the above-mentioned acute effects and the possibility of exacerbated schizophrenia in affected individuals. In contrast, several studies have confirmed the therapeutic effects of cannabinoids for nausea in the later stages of illnesses such as cancer and AIDS. Besides this, it has proven successful in other medicinal uses, including treatment of asthma, as an antidepressant and appetite stimulant (World Health Organization, 2016).

Drug abuse can also be reviewed with its social context. For example, motivation to start using can be traced back to the extent of social acceptance of drugs in the environment (McGregor et al., 2008). Furthermore, drug abuse can lead to social problems or worsen existing ones, converting illicit drug abuse into a socio-economic issue. Besides the effects caused to users themselves, illegal drug abuse impacts society in many ways. Costs related to treatment, drug-related health care, social services, the

cost of police and other authorities, and traffic accidents and other drug-related crimes conducted by drug abusers are all burdened by society.

Cannabis use is a controversial question that divides opinions regarding how the harms caused to individuals and societies can be best reduced. These attitudes are often affected by evaluations of the trade-offs between the adverse effects of restrictive policies and the alleged benefits reported by users. Cannabis policies vary across the world, from harsh prohibitions to unregulated markets. Four US states, the District of Columbia in Canada, and Uruguay have legalized cannabis (Røgeberg, 2015), resulting in a more heated debate on legalization and the extent of regulations (Caulkins & Kilmer, 2016). This is also the case in Finland, where the Green League (Greens) approved an initiative calling for the decriminalization of cannabis in September 2021, being the first party in the parliament to support the legalization of the drug (YLE, 2021; Vihreät, 2021). The initiative aims to decriminalize the use, possession, manufacture, and sale of cannabis and recommends that the same comprehensive regulations (including regulations on manufacture, sales, and taxes) as other legal substances should be applied to cannabis. It also seeks to remove criminal convictions related to cannabis use from citizens' data records (YLE, 2021; Vihreät, 2021).

This thesis will focus on the health and criminality aspects of the current drug strategy and the drugs strategy proposed by the Greens. The introductory chapter will be followed by an overview of the role of cannabis in the Finnish society. This covers

statistics and cost breakdowns on cannabis use and information on current prohibitive policy and legislation cornerstones. Furthermore, the structure of the Finnish drug market and the position of cannabis will be briefly discussed. The methodology of this thesis is theory-driven content analysis, in which theoretical concepts guide the research. The content of interest is the Greens' initiative to legalize cannabis, which will be analyzed simultaneously with the prevailing drug strategy in Finland. These strategies are evaluated against the strategies and interventions to reduce drug-related harm. Eventually, the theoretical framework and analysis will be utilized to discuss how the different policy strategies can be justified or denied according to the behavioral theories and in the light of negative externalities.

The purpose of my thesis is not to find an absolute truth about the superiority of one strategy over the other but to compare the pros and cons of both intervention strategies by looking for answers to the following research questions.

How do the policy goals and targets of the current drug strategy differ from those proposed on the initiative?

How the current drug strategy and the alternative strategy initiated by the Green's can be justified or denied according to the theories of state intervention?

2. Cannabis from the Finnish perspective

Drug abuse is a global phenomenon with several resembling causes and consequences in all nations. Despite these worldwide patterns, each society has its unique traits regarding the drug problem. This section will present the cannabis question from the Finnish perspective by building an overall picture of the illegal cannabis market, current policies, legislations, drug-related public expenditure structure, users' social characteristics, and societal attitudes regarding the drug.

2.1 Statistics of cannabis use

Drug use and related problems have increased over the past decade in Finland. The most used drug is cannabis, whose usage rates have risen steadily since the early 1990s. According to the 2018 conducted drug survey, almost a quarter of the Finnish adult population has tried cannabis at some point in their lives. Seven percent reported use in the last year and three percent in the previous month. Experimentation and cannabis consumption has become particularly common in the 25-34 and 35-44 age groups, while there are signs of leveling off in the younger 15-24 age group. Past-month use, which measures a more regular cannabis use, has also steadily increased in the Finnish population. In 2018, 3% of Finns reported using cannabis in the last month. This number is slightly higher for men in younger age groups, as 9% of men aged 25-34 reported using cannabis in the past month (Rönkä and Markkula, 2020; Karjalainen et al. 2020).

The prevalence of new cannabis users has remained at around 1% throughout the 2010s. This suggests about 40 000 new cannabis experimenters or users each year. Most new cannabis experimenters or users come from the youngest age group of 15-24 years, but there have also been some new cannabis experimenters or users in older age groups. Around a quarter of those who have tried cannabis continue to use it (Rönkä and Markkula, 2020; Karjalainen et al., 2020).

Cannabis is mainly used for recreational purposes (79%), with around 5% of cannabis users reporting that they use it primarily for medical purposes and 17% for both. Cannabis is the most used substance for smoking (91%). Other uses were much less common, with 6% always or mostly using cannabis by vaporization and only 2.5% by eating or drinking. The use of other intoxicants was every day among cannabis users. Around a quarter (28%) had also used some other drug, and just under a fifth (18%) had misused drugs in the past year. A high proportion of cannabis users (81%) had the experience of co-use, the most common being co-use of cannabis and alcohol (Rönkä and Markkula, 2020; Hakkarainen & Karjalainen 2017).

Opinions about cannabis have liberalized among the Finnish population. This reflects the attitudes towards the criminalization of the use and acquisition of cannabis that has become much more permissive than in the 1990s. However, the situation has leveled off since 2014: the proportion of those who believe that using cannabis (42%) or growing cannabis (25%) should not be punished has remained roughly at the 2014 level in 2018. Similarly,

attitudes towards the legalization of cannabis are changing. In 2010, a total of 49% of the Finnish adult population thought that cannabis should not be legally available for any purpose, compared to 28% in 2018. In addition, perceptions of risk associated with experimentation and use of cannabis have diminished, while the health and other risks associated with, for example, weekly binge drinking or daily smoking have become more critical (Rönkä and Markkula, 2020; Karjalainen et al. 2019; Karjalainen et al. 2020).

2.2 Policy and legislation

Finland has a restrictive drug policy that seeks to reduce the use and distribution of drugs in society through criminalization and control (Egnell, Villman, and Obstbaum, 2019). During the last decade, the attitudes have shifted to emphasize harm reduction. The current Governmental Action Plan on Drug Policy highlights preventive measures, decreasing harm, and protecting fundamental human rights (Valtioneuvosto, 2016). However, the repressive control regime remains the primary strategy.

The first national drugs strategy was adopted in 1997. Since then, a strategic Council of State decision on drugs policy has been prepared for each term of government. As the drugs issue is not isolated from other themes, drugs are included in various horizontal strategic policies (e.g., internal security, crime prevention, promotion of well-being, health and safety, youth policy). In addition, a broader perspective that covers all drugs and addictions

(alcohol, tobacco, and nicotine products, drugs, and gambling) is prevalent in the field of drug prevention (Warpenius, 2021).

Finnish drug policy preparation has been based on cooperation between different administrative sectors. The Drug Policy Coordination Group, chaired by the Ministry of Social Affairs and Health, is responsible for inter-ministerial collaboration. The group's task is to develop a drug policy and make it coherent at the national level. In addition to the Ministry of Social Affairs and Health, the group includes representatives of the Ministry of the Interior, the Ministry of Justice, the Ministry of Education and Culture, the Ministry of Finance, the Police Board, Customs, the National Institute for Health and Welfare, the Finnish Medicines Agency (Fimea), the Office of the Prosecutor General and the National Board of Education (Warpenius, 2021).

Besides this, Finland is committed to the United Nations (UN) Conventions against drugs and the European Union (EU) Drugs Strategy 2013-2020. Drug policies are implemented in close cooperation with pharmaceutical policy to ensure access to essential medicines. These drug policies are set at the national and international (EU and UN) levels (Rönkä and Markkula, 2020).

2.3 Finnish drug market

Cannabis products dominate the Finnish drug market, both smuggled abroad and home-grown for personal use and sale. The increasing popularity of cannabis is also reflected in investigations

carried out by the Central Criminal Police Forensic Laboratory. As in 2019, almost 18% of all drug samples examined in the laboratory were cannabis samples (in 2018: around 20%), and hashish accounted for only 3.2% of all drug samples (in 2018: 2.6%). In 2019, police and Customs seizures of cannabis were at a record high of almost 400 kg (2018: 344 kg). In addition, during 2019, police and Customs investigation units discovered that hundreds kilograms of cannabis had been imported in several different criminal cases and had already been distributed in Finland (Rönkä & Markkula, 2020).

Cannabis is imported into Finland in commercial goods traffic, express shipments, and passenger traffic. In many cases, the country of origin of cannabis is Spain, from where criminal organizations run smuggling operations to Finland and the rest of Europe. Good quality cannabis is either grown in Spain or imported from Africa or other parts of Europe. The smuggling of cannabis into Finland is usually carried out by foreign nationals (Rönkä & Markkula, 2020).

The number of cannabis cultivation cases reported to the police has been downward since the early 2010s. However, the number of cannabis plants seized in 2019, at almost 16 000 plants, was higher than in the previous year (2018: around 13 100 plants; 2017: 15 200 plants; 2016: 18 900 plants; 2015: 23 000 plants; 2014: 21 800 plants and 2013: 23 000 plants) (Rönkä & Markkula, 2020). The total annual number of cannabis plants seized is greatly influenced by the number of larger-scale (over 100 plants) growers that the police have uncovered.

Cultivation cases are being uncovered all over Finland, yet a majority of them entailing from large cities. The THC (tetrahydrocannabinol) content of the flower of a cannabis plant grown from a high-quality variety and under favorable indoor conditions can rise to well over 10%. THC is the primary substance in cannabis that causes psychoactive effects of cannabis. In street trade, the flower of the cannabis plant is more valuable than low-quality hashish (*ibid.*).

In Finland, the cultivation of drug cannabis is only sufficiently profitable for professional drug trafficking in purpose-equipped indoor facilities. In skilled hands, up to four crops per year can be obtained. A possible four harvests from a hundred cannabis plantations can yield about 10 kilograms of finished product, which can be sold for 15-20 euros per gram, yielding an illicit profit of 150,000-200,000 euros (Rönkä & Markkula, 2020).

Although cannabis cultivation in Finland is mainly small-scale, it is increasingly professional. It often reveals some cannabis trafficking and other drugs, most commonly narcotics, amphetamines, and ecstasy, as well as illegal firearms (KRP 2020a.) A likely threat is that, despite the downward trend in the number of seized cannabis plants, the domestic cultivation of cannabis will continue to professionalize, with the most prominent growers growing hundreds of plants at a time throughout the year. For example, in Norway and the Netherlands, criminal organizations have for many years carried out large-scale professional cannabis

cultivation in large greenhouses used for flower and vegetable growing (Rönkä & Markkula, 2020).

2.4 Costs of drug use

The implementation of drug policy is significantly influenced by its resources (Rönkä and Markkula, 2020). The latest estimate of direct drug-related harm costs was €299-370 million in 2016 (Jääskeläinen and Virtanen, 2020). These expenses are dominated by social services and the maintenance of public order and safety (Jääskeläinen and Virtanen, 2020).

The most important item (32%) of public expenditure on drug-related harm was social care, which accounted for between €93 million and €124 million. Most of these costs, around €67 million, were for substance abuse treatment. In 2016, social care drug costs had increased by about 21% compared to 2014. This increase was mainly due to drug-related substance abuse treatment costs. The next largest (30%) rise in harm costs was the maintenance of organization and security, which cost around €99 million. Finally, the third-largest share of harmful expenses (19%) was for the judiciary and prisons: between €63 million and €65 million (Jääskeläinen and Virtanen, 2020).

The costs of drug-related harm in health care include outpatient and inpatient care costs in specialized and primary health care,

which totaled between €37 million and €56 million in 2016. Health care harm costs decreased by 2.6% compared to 2014. The largest share of adverse health care costs, around €26 million, is related to the treatment of drug-related diseases in the inpatient wards of specialized psychiatric hospitals (Jääskeläinen and Virtanen, 2020). Drug-related pensions and daily sickness allowances accounted for something between €7 million and €23 million in adverse costs. Of these, disability pensions accounted for the largest share of costs (€11 million on average) (Rönkä and Markkula, 2020).

3. Theoretical arguments for public policy interventions

This section begins with an overview of the social-welfare-maximization problem and the concept of economic efficiency. These function as a preface to the first welfare theorem, which shows the conditions under which efficient market allocation applies.

After that, we will look at some of the possible scenarios of a market failure. This thesis focuses on behavioral and efficiency arguments related to policy intervention. Section 2.2 discusses the assumption of rational individuals by covering the rational addiction theory and behavioral economics. This is followed by section 2.3, which presents externalities of drug consumption and the concept of external cost.

3.1 The social-welfare-maximization problem

The following social-welfare-maximization problem forms the foundation of a policy decision-making process. According to Barr (2012), any policy aims to maximize social welfare according to three sets of constraints: tastes, technology, and resources, i.e.

Maximize:

$$W = W(U^A, U^B) \quad (1.1)$$

Subject to:

Tastes

$$U^A = U^A(X^A, Y^B) \quad (1.2)$$

$$U^B = U^B(X^B, Y^B) \quad (1.3)$$

Technology

$$X = X(K^X, L^X) \quad (1.4)$$

$$Y = Y(K^Y, L^Y) \quad (1.5)$$

Resources

$$K^X + K^Y = \bar{K} \quad (1.6)$$

$$L^X + L^Y = \bar{L} \quad (1.7)$$

The first equation (1.1) aims to maximize social welfare, W , as a function of the utilities of individuals A and B, U^A and U^B . The problem here is the balance of shared maximization of efficiency

and equity. The social welfare is constrained by individual preferences (1.2 and 1.3), production technologies (1.4 and 1.5), and the resources available (1.6 and 1.7).

The problem above is related to a first-best economy, meaning one of the two following situations. Either the economy has no efficiency restrictions and an optimal allocation of endowments, or the state can respond to the inefficiency or maldistribution with first-best policies. In markets where the first-best assumptions hold, meaning that a competitive market allocates resources efficiently, the state has no role in intervening (Barr, 2012).

3.1.1 The concept of economic efficiency

The concept of economic efficiency regards taking the best use out of limited resources given an individual's tastes. This requires the choice of the following output bundle

$$X^* = (X_1, X_2, \dots, X_N) \quad (1.8)$$

Where X_i implies the output of the i th good. Any variations from these quantities will make at least one individual worse off. This intuition can be proved with a partial equilibrium where the optimal quantity of any good can be found when the value placed by society on the marginal unit (MSV) is equal to its marginal social cost (MSC).

Barr (2012) states three conditions that must hold simultaneously for economic efficiency to be fulfilled.

1. Productive efficiency suggests that activities should be organized to achieve the maximum output with the given inputs.

Additionally, the following two conditions are required to be fulfilled for an allocative efficiency to be accomplished

2. Efficiency in product mix means that the combination of produced goods is optimized, given prevailing production technology and tastes. Optimal production can be found when the ratio of marginal production cost equals the ratio of marginal rates of substitution in consumption.

3. Efficiency in consumption requires that individual consumption maximizes its utility. In other words, the marginal rate of substitution must be equal for all individuals.

The concept of the last condition can be demonstrated by defining Pareto efficiency. This means an equilibrium where no unexploited economic gains remain in the market. Testing the efficiency of an allocation is done by considering if it is possible to reallocate the resources to benefit one consumer without harming others (Hindricks & Myles, 2013). Pareto efficiency embodies two value decisions. First, social welfare grows only if one individual's situation improves without making the other person

worse off. Secondly, individuals are the best judgments of their own welfare (Barr, 2012).

3.1.2 The first welfare theorem in a first-best economy

Two theorems describe the efficiency properties of a competitive equilibrium. According to the first welfare theorem, a competitive equilibrium is always Pareto efficient without any market failure. To put this into the concept of our earlier presenter mathematical framework, the market-clearing set of outputs, X_M , will be the efficient output bundle X^* .

This theory applies only in a so-called first-best economy characterized by perfect competition, perfect information, rational individuals, no externalities, complete markets, and non-distortionary taxation. If any of these assumptions fail to hold, the conceived market equilibrium might be inefficient, and state intervention is justified to accomplish efficiency (Barr, 2012).

3.2 Rational individuals

The following subsections will present a theoretical framework for the trade-off between efficiency and equity in a first-best economy in the occurrence of a market failure. Rational addiction theory is used in subsection 3.2.1 to highlight the weaknesses of the first welfare theory regarding human behavior in the context

of drug use. Finally, subsection 3.2.2 will introduce behavioral economics and limited rationality as an alternative motive for state interventions.

3.2.1 Rational addiction theory and critique towards it

In a first-best economy, consumers are assumed to make rational choices about their consumption. This means that the long-term consumption consequences are evaluated against present benefits (Becker & Murphy, 1988). In this model, consumption is initiated only when expected lifetime utility is positive. This scenario presupposes that the consumer has all the information and tools to make the right decision. Under this assumption, a rational consumer cannot be better off by public policy intervention since they are prone to make the right decision. Thus, state intervention is only applicable when consumption creates harm to others. In reality, harmful consumption decisions occur, especially for addictive goods such as drugs (Røgeberg, 2007).

Despite this, some economists believe that policies reduce consumption to a level below the amount consumed on a free market. This is explained by the fact that some consumers tend to underestimate the degree to which current drug consumption affects the desire to consume drugs in the future or underestimate the long-term costs of addiction (Miron & Zwiebel 1995).

The model created by Becker & Murphy (1988) is an extension of consumer theory where everything can be analyzed by evaluating the net benefit and utility behind the individual decision-

making process (Ekelund Jr and Hébert, 2007). According to rational addiction theory, all addiction results from entirely rational choices. The extent to which drug consumers use drugs, despite the adverse effects, functions as evidence that the utility derived from drug consumption is a part of the evaluation process (Miron & Zwiebel, 1995).

Becker and Murphy (1988) translate gradually increasing consumption of addictive goods as a rational application of that good's optimal lifetime consumption timeline. This theory is against the prohibition, regulation, and prevention of addictive goods unless negative externalities are present (Becker and Murphy, 1988; Røgeberg, 2007).

The rational addiction theory has been criticized for making too strong assumptions about the rationality of drug addicts. They are assumed to respond to incentives while creating a long-term plan for their consumption. As hesitation and irrationality are commonly known traits of addiction, the theory has been perceived as theoretically weak (Henden et al., 2013). Moreover, the suggestion that drug consumers consistently underestimate the costs of use and the probability of addiction is inconvenient as the negative consequences of drugs are widely known and, according to Miron & Zwiebel (1995), sometimes overestimated.

3.2.2 Behavioral economics in the context of addiction

Behavioral economics modifies the assumptions and expands consumer theory with factors drawn from different psychology domains. It is a known fact that some of the rationality assumptions of standard economic analysis might paint an unrealistic picture of human nature.

Behavioral economics provides an alternative perspective by allowing more realistic descriptions of individual behavior as it introduces the possibility of decision failure. It distinguishes two types of mistakes as a motivation for public intervention. Firstly, individuals do not know what is best for them because they don't have the necessary information to make the right decisions. Secondly, people know what is best for them, but due to a lack of self-discipline, they cannot act in accordance with this knowledge (Hindricks & Myles, 2013).

Present bias

Present bias explains the self-control problem. It occurs in situations where people make a decision that is responsible for changes in their future preferences. In the context of drug consumption, this bias might result in drug consumption and even though they would have preferred to abstain. The first decision is about whether they start using drugs. This initial decision to start the addictive activity leads to a future judgment of whether to continue with the activity or quit. The nature of addictive activity modifies the future preferences to such that option to continue

the activity is preferred to stopping. Here, the initial preferences are not affected by the addiction yet. People might want to try the activity, making the option to quit later more desired than the option to restrain from the activity altogether. This means that the person making the initial decision has different preferences than the individual making the decision in the future (Hindricks & Myles, 2013). Here, the initial trade-off and assessment of future plans are impacted by time, i.e., the present desire exceeds the future.

Conformism bias

According to Hindricks and Myles (2013), conformism describes the action of changing a belief or choice to conform with the socially prevailing opinions and actions. This usually occurs spontaneously, without any explicit order or outside demand. Economists have explained conformism bias endogenously as an average behavior of society or group that impacts the decision-making of everyone. Here, an individual can decide against the most socially optimal in fear of deviating from the norm. For example, a non-smoker's attitude towards smoking depends on the number of smokers in society or their social group (Røgeberg, 2007). When a social norm supports the undesired decision, a public policy can modify the socially prevailing opinions and actions to achieve better choices (Røgeberg, 2007).

3.3 External effects

The following subsections will present another trade-off between efficiency and equity in a first-best economy in the occurrence of a market failure. We will first discuss the concept of externalities and external costs in the context of drug consumption. After this, the Coase theorem is presented as a theoretical solution to concerns generated by externalities.

3.3.1 Externalities of drug consumption

State intervention can alternatively be justified with negative externalities. External effects emerge when an individual's behavior generates costs or restrains benefits on others without any compensation or payment. According to Barr (2012), external effects create a distinction between private and social costs and benefits, which results in a market output more significant than the efficient output, X^* .

Externalities do not mean that the consumer benefits can be ignored. Instead, they highlight the difference between socially optimal consumption and the individually optimal level. Miron and Zwiebel (1995) shifted the focus from studying whether drug consumption generates externalities to how the externalities compare to those caused by prohibition.

They stated that prohibition could, in fact, enhance some externalities related to consumption. This might happen when prohibition reduces drug consumption but simultaneously increases consumption of other harmful goods that generate externalities (Miron & Zwiebel, 1995). According to Model (1993), cannabis use increased, and other drug use decreased in the 12 states of the USA after decriminalization in the 1970s.

Miron & Zwiebel also point out that externalities caused by substitutes of illegal drugs can be at least as severe as those for drugs. For example, detrimental effects of alcohol on driving ability are, as a minimum, at the same level as those of cannabis (U.S. Department of Transportation, 1993). In addition, prohibition can also have a negative effect on health care resources like the use of alternative goods arises.

Miron and Zwiebel (1995) mention that the externality-reducing effects of prohibition depend on the fact that externalities are more associated with heavy use as state intervention affects more casual users.

External cost

Externalities can be either positive or negative, but external cost is usually an outcome of a negative externality. This is when the social cost of an activity surpasses the private cost for individuals engaged in the activity. External costs, such as increased burden on a publicly provided healthcare system or the impact of acquisitive crime (MacDonald, 2004), are closely linked to the production and consumption of a good, but this type of cost is excluded

from the producer or consumer's decision-making. Consequently, production or consumption of a good rises to a level making it socially optimal to reduce the quantity. This results in economic inefficiency as the market forces fail to maximize welfare, suggesting that the socially efficient output rate can be produced only when the external cost is considered in the consumption decision process (Røgeberg, 2007).

3.3.2 Coase theorem

According to the Coase theorem, many of the concerns related to externalities can be solved with negotiations. Coase (1960) underlines the mutual or bilateral nature of external effects, which means that the responsibility of causing an externality falls on both parties, but the main concern is the property right to cause or avoid the externality in question. Clearly defined property rights allow different parties to negotiate and buy rights from each other until the social optimum is reached (Coase, 1960; Hindricks & Myles, 2013). In theory, drug consumers would negotiate with other actors in the society and pay for the right to consume drugs until the socially optimal amount of drug consumption is achieved. This proposes that the market would solve the inefficiency itself, and a policy intervention would not improve society's welfare and would therefore be redundant (Barr, 2012).

On the contrary, negotiations are impossible in situations where the transaction costs are high due to unenforceable property

rights or large numbers of people involved (Barr, 2012). Therefore, even though transaction costs are only theoretical and inherent in most transactions, their existence is necessary for policy intervention to surpass private negotiation (Coase, 1960). This means that too high transaction costs prevent the optimal solution from being reached as they override the benefits of negotiation (ibid.). In this case, a policy intervention leads to increased welfare in a society.

4. Strategies and interventions to reduce drug-related harm

Babor T.F et al. (2010) presented an overview of drug policies and the relationship between research and policy in their book *Drug policy and the public good*. The book stated that policy reforms should not just focus on public health and longevity, but also on concerns about justice, freedom, morality, and other topics that aren't directly related to health. The role of research is to present the expected consequences of different policy options instead of prioritizing the different outcomes from good to bad.

This approach limits the role of research to two. The first one is to provide a set of applicable policies and their effect on the surrounding society. The second role contains identifying applicable policies to achieve a given set of targets and concerns. For example, different actors might emphasize different concerns, thereby

supporting different policies. In this case, the disagreement cannot be solved with research, and the best approach for a policy-maker would be to repeal existing policies rather than pursue new ones (Babor et al., 2010).

Rogeberg (2015) identified three different drug policy movements based on the book written by Babor T.F et al. (2010). Drug policies have predominantly focused on minimizing drug consumption with strict regulations. This is usually combined with health care services dedicated to drug users and collaborative efforts to eliminate the production and supply of the drug. However, during the last decade, new approaches have emerged that promote other concerns and seek to reform the policies. The first and perhaps most successful approach is the harm reduction movement, which supports policies that aim to reduce drugs' health, social, and economic damages to individuals, communities, and societies (Rhodes and Hendrich, 2010). The second movement highlights the negative effects of illicit markets, especially the violence, corruption, and social problems originating from drug cartels that produce the drugs. The third movement is the cannabis legalization movement that emphasizes the positive effects of cannabis reported by the users and promotes the drug as a less harmful intoxicant (Rogeberg, 2015).

Babor T.F et al. (2010) have categorized the types of drug policy alternatives into five: primary prevention, services for chronic drug users, supply control, the use of criminal sanctions, and regulations to prevent the misuse of psychopharmaceuticals. Besides these, several social actions that are built to target objects

above drug control have an equally important role in reducing drug problems. However, these actions are excluded from the analysis due to their broader characteristics.

Table 1. Drug control strategies and interventions categorized by targeted policy and broader policy goals.

Policy area	Examples of strategies and interventions	Broad policy goals
<i>Prevention</i>	Drug prevention programs, mass media campaigns, reducing access through policing	Change attitudes, improve health literacy, prevent drug use
<i>Targeted services for drug users</i>	Opioid substitution therapy, counseling, therapeutic communities, coerced abstinence through parole supervision, needle exchange programs	Reduce drug use, crime, and overdose deaths, prevent the spread of blood-borne viruses, improve health
<i>Supply control</i>	Sanction traffickers and dealers, force suppliers to operate in inefficient ways	Keeping prices high, reduce availability
<i>Prescription regimes</i>	Regulate pharmaceutical companies, pharmacists, and physicians	Allow psychoactive substances for approved purposes, prevent use for non-approved purposes
<i>Criminal sanctions on possession or use</i>	Increase penalties for drug possession and use <i>OR</i> Decrease penalties for some types of drug use (e.g., cannabis)	Deter drug use; prevent normalization and contagious spread of drug use <i>OR</i> Prevent negative effects of criminalizing less harmful forms of drug use

Source: (Babor T.F et al., 2010; Babor, Room and Strang, 2010)

Prevention programs

Some studies have found evidence of prevention programs to prevent drug use initiation or the possibility of progressing from experimentation to regular drug use. However, while these programs seem to affect drug use positively, the main focus is not on drugs. Instead, their purpose is to improve the individual's general behavior and social skills. Conversely, studies have not found evidence of the effectiveness of solely educational prevention programs that concentrate on drugs (Babor, Room, and Strang, 2010).

Health and social services

Health and social services target adverse effects of drug use by encouraging sobriety, decreasing the amount or degree of drug consumption, limiting the direct harms created by drugs, and attempting to modify harmful behavior that affects both the individual user and society at large. Studies have shown strong support for the effectiveness of therapeutic communities, contingency management, counseling, and interventions for cannabis and moderate-level drug addictions.

The overall effectiveness of the health and social system depends on the policies that define the type, degree, and organization of the services. These systems vary from country to country in the context of their availability, accessibility, coordination, cost-effectiveness, and degree of coerciveness. Babor, Room, and Strang (2010) emphasize the importance of policymakers operating at a system level for a policy to be effective at the individual and societal levels.

Supply control

Policies that target supply control seek to limit illicit substances' production, distribution, and trade by offering alternative development programs in producer countries, controlling chemicals used in the production process, and incarcerating drug dealers. However, interventions for supply control lack evidence of their effectiveness mainly due to the difficulties to evaluate the effects on either the supply or the pricing on the drug market.

Babor, Room, and Strang (2010) have concluded a variety of reasons why supply control approaches lack the desired impact. First, studies have found no evidence of the effects of alternative development as a global drug control strategy on the abundance of drug usage in consuming countries. Secondly, positive results from interventions upon the distribution chain cannot be copied for further use since the present literature only provides estimates of the interventions' effect on the market. Thirdly, existing evidence shows diminishing returns from extended imprisonment of drug dealers to supply-side policies. Lastly, targeting the end-users and producers that function on a street level has no significant effect on the excess of drug usage due to the high quantity of sellers. This will result in difficulties for the criminal justice system to distribute punishments and bear a burden on the nation's drug control spending. Instead, its central effects might be limiting damages related to drug markets, supporting users in contacting service providers, and voicing the moral outrage of societies.

Criminalization and decriminalization of drug use

Researchers have been interested in the possible benefits of minimizing criminal punishments for possession of small quantities of drugs for personal for a while. Such changes have been made for cannabis at an accelerating pace in several jurisdictions. Some countries have modified this concerning all prohibited drugs. The majority of the decriminalization or depenalization programs contain the substitution of civil penalties for criminal penalties for possession crimes meantime retaining prohibition in force. This might increase demand as the deterrent effect of the law decreases, according to Babor, Room, and Strang (2010).

Studies concerning decriminalization have found only a little effect on the prevalence of cannabis consumption. Babor, Room, and Strang (2010) use the Dutch coffee shop system as an example of a liberal approach that allows legal cannabis consumption for adults. Cannabis consumption rates of young adults increased first when the coffee shop system became more widely known but shortly decreased to the approximately same level as in other western European countries.

The conclusion drawn from the prevailing evidence by Babor, Room, and Strang (2010) states that the removal or decrease of criminal penalties on drug possession does not lead to significant increases in cannabis use. Nevertheless, the research is limited due to multiple reasons. First, most of the research originates from developed countries, and the evidence about the effects of recriminalization or intensified enforcement is limited. Besides this, the methods used to study the effects are usually weak.

Prescription regimes

The policy goal for prescription regimes is to allow psychoactive substances to be used for approved purposes and prohibit their use for non-approved intentions. This can be done by, i.e., preventing ‘doctor-shopping’ and controlling the medical and pharmacy system responsible for the supply of psychopharmaceuticals. The available evidence shows that prescription regimes affect physicians’ behavior, despite usually resulting in medication substitutions. This can be avoided using price as a tool to modify demand between two substituting drugs from a more harmful one to a less risky alternative. Another option is to create more controlled prescription registers that limit the prescriptions resulting in a decrease in the quantity rescripted. Babor, Room, and Strang (2010) conclude that robust pharmacy systems can restrict the non-approved use of illicit prescription drugs. On the contrary, these kinds of systems have not been strong enough to prevent epidemic prescription drug misuse in countries where the demand for psychopharmaceuticals is exceptionally high (ibid.).

5. Methodology

This thesis uses content analysis as a strategy for making empirical observations. When political phenomena of interest cannot be measured with interviews, surveys, or direct observations, content analysis is the preferred method among political scientists (Janet Buttolph Johnson, Joslyn, and Reynolds, 2001).

Tuomi and Sarajärvi (2009) address content analysis from the perspective of the American qualitative research tradition in their book *Laadullinen tutkimus ja sisällönanalyysi*. They state that content analysis is the endeavor to describe the content of documents verbally.

The content of interest in my thesis is the Greens' initiative to legalize cannabis. These types of initiatives can be submitted by the Parties' member associations and individual members, requiring at least four members together. In addition, the party government, the party delegation, the parliamentary group, the party's working groups, and the Green Group in the European Parliament have the right of initiative (Vihreät, n.d.).

After the initiative has been drafted, the party government will state what has been done and outlined in the past and whether the government supports the initiative's proposals. After this, the Party Government will propose the decision to be taken by the party assembly (Vihreät, n.d.). According to the party's website, the motion to legalize cannabis has been drafted by a group of personal members.

In September 2021, The Green Party Conference approved the initiative to legalize cannabis in Finland by a narrow two-vote majority of 183-181 (Niilola, 2021). The initiative was presented together with 18 other party congress initiatives, which can be found in their entirety on the Green Party's website. They are also available as a printable PDF version in the meeting's file folder (Vihreät, 2021).

The initiative contains an estimated 20 paragraphs of arguments for legalization, from which I have selected the subheadings most relevant to my thesis. From these subheadings, I have extracted the most applicable arguments for my analysis and made direct quotations by translating them from the original language into English. I have deliberately chosen to exclude the original initiative from my thesis due to its large size.

Besides this, the document is publicly available on the party's website, which offers excellent advantages concerning the ethics of my research. When research involves collecting existing data, documents, or records, it rarely conflicts with an individual's interest as the data's unit of analysis is not the individual. Additionally, publicly available records or documents that do not identify specific individuals decrease the chance of ethical concerns occurring (Janet Buttolph Johnson, Joslyn, and Reynolds, 2001).

Content analysis of qualitative data can be done in a data-driven, theory-driven, or theory-based manner (Tuomi & Sarajärvi, 2009). I utilize theory-driven content analysis, in which theoretical concepts guide the research. Here, theoretical linkages exist, but they are not directly derived from the theory. The units of analysis are chosen from the data, but the analysis is guided by and impacted prior knowledge (*ibid.*). Data-driven content analysis and theory-driven content analysis are both derived from data, but in the theory-driven analysis, theoretical notions are

brought forth as ‘already known,’ whereas, in data-driven analysis, they are formed from the dataset.

It is important to distinguish between findings and data when conducting qualitative social science research. According to Alasuutari (1999), observations should be seen only as clues interpreted to get behind the observations. Empirical findings might be difficult to differentiate from the results of a study, as the findings tend to provoke interest independently and can be interpreted in different ways using common sense alone. In research, findings are always examined from a particular and explicitly defined perspective, i.e., a theoretical framework. The research method consists of the practices by which the researcher produces observations and the rules by which the observations can be shaped and interpreted (*ibid.*).

The question of validity and reliability are of importance when conducting qualitative research. Reliability is concerned with the trustworthiness of a study, which is determined by whether the study measures what the researcher promises to be measured. This is difficult in qualitative research since the evolvement of social surroundings cannot be stopped (Bryman, 2011). As this thesis focuses on a political environment that is constantly evolving, it is important to outline the timeframe in which the study has been conducted. This thesis attempts to describe the current political climate and social environment as accurately as possible to connect the empirical data of the initiative to the situation today. The validity of research is concerned with whether the conclusions are consistent. The topic of internal validity is whether we

can be certain one variable causes what or additional connections at work. On the contrary, external validity is concerned with whether the results may be applied outside of the given context. (Bryman, 2011).

Because of the criticisms of qualitative research's reliability and validity, the literature suggests using four principles to assess the reliability of qualitative research (Bryman, 2011). The first one is *credibility*, which can be ensured through triangulation or using multiple methods or data sources. As the data being analyzed is a political publication, it rules out the possibility of human error in data collection. This thesis interprets the data with a theory-driven approach, where a framework of political interventions supports the core theory to limit the possibility of misinterpretation of the data. The second concept is *transferability*, which implies that the researcher creates deeper descriptions of the contextual information, allowing others to assess how transferrable the results are (ibid.). As my study is conducted in the political environment of Finland, the results might not be transferrable to other countries. However, this does not mean that the analysis of the differences between a restrictive and liberal drug policy could not be applied to other regions, as the debate of the two policies is universally discussed. The third principle is dependability, which is based on auditing or showing each research process step. This is considered in the chapters describing the method, analysis, discussions, and conclusions. The fourth and last principle is *confirmability*, which is determined by whether the research is objective in the sense that the researcher has operated in good faith without their own influence throughout the results

(ibid.) As qualitative research exposes the risk of allowing the writer's own opinions to influence the interpretation of the results, the theory-driven approach increases the confirmability by providing a framework for the analysis. Furthermore, this study aims not to draw conclusions about the effectiveness of different policies but to use a theoretical framework to analyze and illustrate the differences between the two strategies. Thus, the study's conclusion is not an absolute truth about the effectiveness of a strategy but rather an interpretation of how a drug policy can be justified in light of the theories.

6. Analysis of the main differences between the current drug strategy and the initiative

This chapter focuses on analyzing the differences between Finland's current drug policy and the one initiated by the Greens, using the strategies and interventions to reduce drug-related harms outlined in chapter three. The analysis is supported by the evidence from scientific studies that have focused on the effects of cannabis legalization. The chapter ends with a summarizing analysis of the differences between the two policy approaches.

6.1 Prevention

As stated earlier, the current Governmental Action Plan on Drug Policy highlights preventive measures (Valtioneuvosto, 2016). This means that one of the policy goals is to influence knowledge, attitudes and rights, protective factors, risks for substance use, and patterns of use, availability, supply, and harm. In practice, substance abuse is not differentiated from the promotion of well-being, health, and safety. This is reflected in the structure of the Finnish legislation, as drugs are not isolated from other legal themes but are also included in various national horizontal strategic policies (e.g., internal security, crime prevention, promotion of well-being, health and safety, youth policy) (Warpenius, 2021).

According to the Act on Organizing Preventive Substance Abuse Services (523/2015), responsibility for preventive substance abuse work lies primarily with the public authorities, but the work must be carried out in cooperation with non-profit organizations. The Ministry of Social Affairs and Health is in charge of coordinating substance abuse prevention on a national level. At the same time, the Finnish Institute for Health and Welfare (THL) develops and directs substance abuse prevention work throughout the country in cooperation with other authorities. The work of the regions in the field of drug prevention is guided by the regional administrative agencies, which are also responsible for planning and developing the work and supporting the municipalities in the region in implementing and developing drug prevention work. In addition to the regional administrative agencies, regional support is also provided, depending on the region, by

regional associations, health care districts, and municipal associations and, in the future, if the social welfare reform of the Marin government goes ahead, by welfare regions (formerly social welfare counties). The main responsibility for local substance abuse prevention lies with the municipalities, where all branches of government carry substance abuse prevention work in the everyday environments of different age groups. However, substance abuse work is not only part of the public services of the municipality. Organizations and other third sector actors also play a key role in implementing practical substance abuse prevention work. For example, they promote debate and information to influence attitudes, organize peer support and provide aftercare for people in recovery (Rönkä and Markkula, 2020).

The Action Plan on Alcohol, Tobacco, Drugs, and Gambling, coordinated by THL, was published to support the implementation of act 523/2015. This program is aimed at those involved in preventive substance abuse efforts in municipalities and regions, the management of the work, and the actors supporting the work at a national level. The plan contains six priority areas to make substance abuse prevention efforts comprehensive, effective, and cost-efficient. These priorities include strengthening national, regional, and local structures for the work, knowledge-based communication to individuals and policymakers, more effective early identification and support, dissemination of the so-called Pakka model of action to reduce alcohol, tobacco, and gambling harm, mobilizing local communities, and strengthening the skills of professionals (Rönkä and Markkula, 2020).

Finnish police have a substantial role in preventive measures. As the main duty of the police and prosecution system is to safeguard law and order, maintain public order and security, and prevent, investigate, and prosecute criminal offenses, the aim in all these activities is to have a preventive action or influence. Community policing focuses on, among other things, the prevention of exclusion, school, internet, and youth policing, which includes working closely with schools as a part of their anti-drug activities. Besides this, the police provide information at the local and national level on drug-related crimes and their background, with a particular focus on young people who might be considered vulnerable to drug experimentation (Rönkä & Markkula, 2020).

Despite these preventive measurements, there are around 40 000 new cannabis experiments or users each year. This is especially alarming since most of the experiments come from the age group of 15-24 years (Rönkä and Markkula, 2020; Karjalainen et al., 2020).

The Greens' initiative states that neither decriminalization nor the current prevention measures contribute to the objective of under-age drug use. They claim that the prohibition and unregulated markets, in fact, exacerbate the problem since the street or internet traffickers are not obligated to ask for proof of identity during the purchasing process. This means that it is currently easier for minors to get illegal drugs than alcohol. Even though the initiative does not provide any concrete suggestions or substituting measurements for the current preventative work, it offers legali-

zation to tackle underage cannabis consumption. The Greens emphasize the importance of preventing underage use, as the negative health effects appear to be greater when the drug use starts at a young age (Vihreät, 2021). Legal and strictly regulated markets would focus on preventing underage use during the purchase process. In practice, the purchasing process would be monitored the same way alcohol is regulated.

Studies that have evaluated the programs preventing illicit drug use by young people have mainly been done in the USA. Babor et al. (2010) reviewed several studies and concluded that the interventions that provided some evidence of effectiveness had two characteristics in common. Firstly, they focused on early intervention with the proximal social environment. Secondly, they deal with problems other than drug use by concentrating on social and behavioral development. For example, Furr-Holden et al. (2004) studied two theory-based prevention programs, a family-school partnership intervention and a classroom-centered intervention, that were developed to improve early risk behaviors in primary school. The study reported evidence that the classroom-centered intervention might provide protection against early initiated use of illegal drugs, such as cocaine and heroin (but not cannabis).

Even though some evidence-based school- or family-oriented programs might provide mildly effective outcomes, most preventive programs have proven to be ineffective. For example, programs that offer drug-relevant information or focus on boosting

the participants' self-esteem have shown no evidence of effectiveness. Babor et al. (2010) evaluate the average cost for preventive measurements as relatively low, which might explain why some of the modest ratings of effectiveness are being tolerated by some policymakers. In conclusion, the outcomes of preventive measures vary from ineffective to subtle effect, yet none of the studies conducted on the subject had proven to be effective for cannabis.

6.2 Services to reduce drug-related harm

The most significant item of public expenditure on drug-related harm was social care (32%), which accounted for something between €93 million and €124 million. Most of these costs, around €67 million, were for substance abuse treatment. In 2016, social care drug costs had increased by approximately 21% compared to 2014. This increase was mainly due to a rise in drug-related substance abuse treatment costs (Jääskeläinen and Virtanen, 2020).

The costs of drug-related harm in health care include the costs of outpatient and inpatient care costs in specialized and primary health care, which totaled between €37 million and €56 million in 2016. Health care harm costs decreased by 2.6% compared to 2014. The largest share of adverse health care costs, around €26 million, is related to the treatment of drug-related diseases in the

inpatient wards of specialized psychiatric hospitals (Jääskeläinen and Virtanen, 2020). Drug-related pensions and daily sickness allowances accounted for between €7 million and €23 million in adverse costs. Of these, disability pensions accounted for the largest share of costs (€11 million on average) (Rönkä & Markkula, 2020).

Services for drug users fall under the larger category of harm reduction in the current drugs policy. Here, the aim is to reduce the social, health, and economic harms of drug use to society, communities, and individuals through a range of interventions and other approaches (Rönkä & Markkula, 2020). These services are determined by law, which also ensures the right to the necessary means of subsistence and care if they are unable to provide for themselves the security of a life of dignity (731/1999). This equality guaranteed by law is reflected in the Finns' opinions on the acceptability of the current harm reduction measurements, as 79% of the population approved the already established services according to the 2018 Drug Survey (Rönkä & Markkula, 2020; Kotovirta & Tammi 2018).

The focus of the current services is to reduce, for example, infectious diseases, overdoses, mortality, crime, social exclusion, and injecting. This is being done by offering needle exchange, opioid substitution treatment, health and service counseling, peer support, and outreach work. The basic premise of these approaches is a low threshold, i.e., that services are free of charge, non-judgmental, confidential, and anonymous (Rönkä & Markkula, 2020; Kotovirta & Tammi 2018).

Health and social services for drug users are aimed to benefit not only the users but also the society. There are only a few interventions that are primarily designed for cannabis users due to the lack of adequate and tailored medications to treat drug addictions other than opiates (Babor et al., 2010). Cannabis users are often treated with psychosocial interventions that attempt to cover a broad amount of drug use and related problems by modifying behavior, cognitions, and social components. Studies that have compared interventions with an untreated control group have found support for the claim that counseling interventions reduce cannabis use more than no counseling (Stephens et al., 2000; Copeland et al., 2001).

The police and prosecutors carry out a substantial role in harm reduction. The legislation emphasizes the unique position of minors and individuals who are heavily addicted. For these groups, the prosecutor can consider the possibility of non-punitive measures, which means restraining from prosecuting. In the case of problem drug users, the Prosecutor General's official guidance (2018) requires efforts to provide treatment and care before imposing a fine (Rönkä & Markkula, 2020).

The guideline also outlines the procedure for interviewing those under 18 caught in a drug use offense. Instead of the previous round of interviews, the young person is subjected to two rounds of more intensive control than the previous sanction. The under-age offense of drug use will only be punished after two rounds of interviews if the young person continues to use drugs and the police become aware of the use. When a minor is caught for the first

time for a drug use offense, the interview is conducted by the police, for example, during an interrogation, to issue a warning under the Pre-Trial Investigation Act and encourage the young person to remain drug-free in the future. The prosecutor does not take part in this interview. Suppose the young person is caught again for a drug-related offense after the interview and the warning. In that case, a preliminary investigation will be carried out, and the case will be brought to a rapid prosecution. In this case, the prosecutor will organize an oral hearing under the Criminal Procedure Act, to which the minor's guardian(s) and, if necessary, a representative of both the police and the social and health care authorities will be invited. The purpose of the hearing is to obtain a discretionary non-prosecution (Rönkä & Markkula, 2020; VKS 2018).

The Greens critique targets the stigma of illegality that hinders individuals from getting help. Even though the basic premises of the current services are low threshold, it often covers only the services tailored for heavily addicted individuals who consume other drugs than cannabis. As stated earlier, studies have found psychosocial interventions as effective for cannabis users (Babor et al., 2010). This means that the current system forces cannabis users to decide between admitting to having committed a crime or abstaining from treatment.

“The illegality of cannabis also raises the threshold for reporting its use. For example, when applying for mental health services, it is important to be open about drug abuse to be considered.

However, even in the health care sector, illicit drugs are not always constructively treated. For example, it is common to require patients seeking therapy services to undergo a compulsory drug test as a condition for access to treatment. Cannabis use, defined as moderate, can also be a barrier to Kela's provision of rehabilitation psychotherapy (Kela, 2020). Mental health services may not even be covered if you admit to using cannabis” (Vihreät, 2021, para. 2.4. Own translation).

6.3 Supply control and the cannabis market

According to the police, Finland's typically loosely structured professional crime has become more organized and disciplined. The major drug crime cases investigated in Finland clearly show that drug trafficking is professional and mainly in the hands of organized criminal groups. Criminal motorcycle gangs have a strong position in domestic drug trafficking operations and close and effective links with foreign countries. Import consignments are delivered for distribution quickly, and communication is efficient and systematically encrypted. Large-scale and serious drug offenses are generally professional and firmly controlled by organized criminal groups. However, despite international developments, Finland is not one of the world's primary drug trafficking destinations because of its remoteness and small population (Rönkä & Markkula, 2020).

Despite the increased organization and professionalism, the Finnish drug markets are composed of different levels. This means upper-level importers and wholesalers, middle-level dealers, and lower-level traffickers operating in different ways. The results of studies show that drug trafficking in Helsinki from top to bottom does not always appear to be a very rational activity. In practice, it is more a question of addiction or dependence and other problems than of systematicity (Rönkä & Markkula, 2020; Perälä, 2011).

The most popular cannabis product on the Finnish market is cannabis, which is smuggled from abroad and home-grown for personal use and sale. The increasing popularity of cannabis is also reflected in investigations carried out by the Central Criminal Police Forensic Laboratory. In 2019, almost 18% of all drug samples examined in the laboratory were cannabis samples (in 2018: around 20%), and hashish accounted for only 3.2% of all drug samples (in 2018: 2.6%). In 2019, police and Customs seizures of cannabis were again at a record high of almost 400 kg (2018: 344 kg). In addition, during 2019, police and Customs investigation units discovered that several hundred kilograms of cannabis had been imported in several different criminal cases and had already been distributed in Finland (Rönkä & Markkula, 2020).

Cannabis is imported into Finland in commercial goods traffic, express shipments, and passenger traffic. Couriers are made up of people of many different nationalities. In many cases, cannabis is either grown in Spain or imported from Africa or other parts

of Europe. The smuggling of cannabis into Finland is usually carried out by foreign nationals (Rönkä & Markkula, 2020).

The number of cannabis cultivation cases reported to the police has been downward since the early 2010s. However, the number of cannabis plants seized in 2019, at almost 16 000 plants, was higher than in the previous year (2018: around 13 100 plants; 2017: 15 200 plants; 2016: 18 900 plants; 2015: 23 000 plants; 2014: 21 800 plants and 2013: 23 000 plants) (ibid.).

The total annual number of cannabis plants seized is greatly influenced by the number of larger-scale (over 100 plants) growers that the police have uncovered. However, many growers of a few cannabis plants have found that even small-scale cultivation for personal use is ultimately too patient, time-consuming, and risky, even if the growing tools, seeds, and instructions are readily available from online shops. Therefore, it is likely that this group of former growers has chosen to obtain their cannabis the easier way, by buying it from online shops and delivering it to their homes (ibid.).

Although cannabis cultivation in Finland is mainly small-scale, it is increasingly professional. It often reveals some cannabis trafficking and other drugs, most commonly narcotics, amphetamines, and ecstasy, as well as illegal firearms (KRP 2020a.) A likely threat is that, despite the downward trend in the number of seized cannabis plants, the domestic cultivation of cannabis will continue to professionalize, with the largest growers growing hundreds of plants at a time throughout the year. For example, in

Norway and the Netherlands, criminal organizations have for many years carried out large-scale professional cannabis cultivation in large greenhouses used for flower and vegetable growing (Rönkä & Markkula, 2020).

The maintenance of organization and security accounts for the second-largest share of harm costs for the society, equivalent to €99 million in 2019. Right behind are the harm expenditures for the judiciary system and prisons, which has been estimated to be somewhere between €63 million and €65 million (Rönkä & Markkula, 2020; Jääskeläinen and Virtanen, 2020).

The Greens' outlook of supply control strategies is conversely. Like previous intervention strategies, they offer legalization as a solution to most of the problems created by illicit drug markets. In addition, the initiative takes a stand on the so-called gateway theory, an argument often used against the legalization of cannabis, by turning it against the prohibition.

“According to THLs experts, there is no research evidence (Eduskunta, 2021) on the so-called gate theory, i.e., the hypothesis that cannabis leads to the use of stronger drugs. Many studies that have tried to find evidence for gate theory have failed to find it (Rabiee et al., 2020). Other studies have shown at least uncertain results, largely related to other causes, such as the status of cannabis as an illicit drug, leading to individuals being exposed to the availability of other illicit drugs (Hall and Lynskey, 2005)” (Vihreät, 2021, para. 2.5. Own translation).

“The link between cannabis and stronger illicit drugs is related to the illegality of cannabis. When cannabis is bought through illicit networks, it also creates routes to stronger illicit drugs. The repeal of the Prohibition Act will prevent this situation when the street trade moves to legal outlets selling only legal and regulated drugs, without the dangerous unregulated drugs being available” (Vihreät, 2021, para. 2.5. Own translation).

The Greens also states that the legalization of cannabis would allow police resources to be re-distributed to control other crimes. According to the information provided by the initiative, tens of thousands of cannabis plants are seized by the police every day. In 2018, 13 085 plants were seized in more than a thousand home searches (European Monitoring Centre for Drugs and Drug Addiction, 2020). The Greens argue that the police resources are used inefficiently when focusing on discovering where cannabis plants are grown and eradicating plants.

“Police and judicial efforts are not having a sufficient deterrent effect on the availability of cannabis, as was the case under the alcohol prohibition law. Despite the prohibition, use is increasing, and with it, the proceeds of organized crime. This leaves society with the role of the bill payer. Police resources should be targeted at combating other crimes by removing the cannabis market from criminals” (Vihreät, 2021, para. 2.7. Own translation).

Studies conducted to evaluate supply-side interventions have little to say about their effectiveness. This is mainly due to inconsistency in data that complicates the evaluations of strategies up in the supply chain, such as interdiction, precursor control, and crop eradication. Besides this, prevailing literature lacks evidence of the possible benefits of punishing high-level dealers and the longer periods of imprisonment. Babor et al. (2010) state that the results may depend on the epidemic stage of a specific country. According to Tragler et al. (2001), supply control is more effective when the demand for drugs is growing, compared to the later stage when the demand is settled and the number of sellers increases.

6.4 Prescription regimes

Cannabis is the most used drug globally, internationally controlled under the 1961 United Nations (UN) Convention on Narcotic Drugs. According to the UN World Drug Report, an estimated 188 million people used cannabis as a drug in 2018. In addition, the psychoactive component of cannabis, tetrahydrocannabinol (THC), is listed separately in another UN drug convention, the 1971 Convention on Psychotropic Substances (Pihlainen & Hyttinen, 2020).

The production, manufacture, export, import, distribution, and trade of substances and plants considered drugs under the UN

Conventions - such as cannabis (*Cannabis sativa* L.) - are subject to licensing and are restricted to medicinal and research purposes. Medicinal products containing cannabis or other drugs are subject to stricter controls than those that do not contain drugs. Most of the restrictions and licensing procedures for cannabis in Finnish national drug legislation come directly from the requirements of the UN Conventions (Pihlainen & Hyttinen, 2020). Besides this, Finland is committed to the European Union Drugs Strategy 2013-2020 (Rönkä & Markkula, 2020).

The Narcotic Substances Act (373/2008) classifies psychoactive substances into two categories: narcotic drugs and psychoactive substances banned from the consumer market. Accordingly, the production, manufacture, import, export, transport, transit, distribution, trade, handling, possession, and use of narcotic substances are prohibited. However, exceptions to this prohibition may be made for medical, research, and control purposes (Rönkä and Markkula, 2020).

The responsibility for the pre-and post-marketing surveillance of medical products and the supervision and control of the manufacture, import, distribution, marketing of medicinal products lies with Fimea. They are also in charge of monitoring drug use for both medical and research purposes. Cannabis products that seek marketing authorization are subject to the same regulatory requirements as other medicinal products in Finland. This means that a marketing authorization requires research evidence to prove that the expected benefits of the medicinal product outweigh the harms at the population level when used in accordance

with the instructions and when the existing marketing requirements are met (Pihlainen et al., 2020).

The first cannabis-based medicinal product was introduced to the Finnish Pharmacy market in 2013. Sativex is intended to treat patients with multiple sclerosis (MS) as an adjunct to other medications when these have not been sufficiently effective. In exceptional cases where the desired treatment outcome has not been achieved with the authorized medicine Sativex, a special authorization for the release for consumption of unauthorized cannabis-based preparations may have been sought under the responsibility of the treating physician (Pihlainen et al., 2020).

Since then, Epidyolex, a medicine containing cannabidiol (CBD) isolated from the cannabis plant and highly purified as an active ingredient, received EU marketing authorisation in 2019 for the treatment of certain rare forms of childhood-onset hereditary epilepsy (Pihlainen et al., 2020).

Several other cannabis-based products are sold online, which puts the consumer at risk when purchased. It is currently difficult for consumers to ascertain the legality of products they purchase due to the wide variety of products and purchasing channels. Un-tested cannabis-based products are not only illegal in Finland, but also lack certainty that they are safe to use (Pihlainen et al., 2020). This is especially problematic since around 5% of cannabis users have reported using cannabis for medical purposes and as high as 17% for recreational and medical purposes (Rönkä & Markkula, 2020; Hakkarainen & Karjalainen, 2017).

Even though cannabis is legal in Finland for medical purposes, it is unnecessarily difficult to get a prescription (Vihreät, 2021). The problems corresponding to prescription cannabis have to do with its reimbursement, as stated below.

“For example, Kela has outlined that medical cannabis will not be replaced by a commitment to pay for prescription drugs that accompany the income support decision. Cannabis is also considered to be excluded from normal drug reimbursement in Finland, although the European Parliament, in its resolution in 2019, demanded that cannabis-based medicines be replaced in the member states through the health insurance system (European Parliament, 2019). Kela and Valvira have also been interpreted as putting pressure on doctors to refrain from prescribing cannabis to patients (Malin, 2019), although the European Parliament has called on the Member States not to interfere with doctors' free professional judgment when prescribing cannabis (European Parliament, 2019)” (Vihreät, 2021, para. 2.6. Own translation).

According to Babor et al. (2010), changes in costs or level of reimbursement is a common action to control the demand for a specific medicine. This could be interpreted as actions keeping the demand for cannabis-based products as low as possible to minimize the risk of recreational use of prescriptions.

The initiative also highlights the problems that arise from the public perception that recreational cannabis use is illegal and unacceptable. The legalization of cannabis could alleviate the prevailing opinions of doctors and other medical staff and thus make it easier to dispense medical cannabis, according to the Greens. They argue that the difficulty of obtaining a prescription practically forces patients to commit a crime when purchasing cannabis from the illegal market for medical purposes. This, in turn, can lead to problems in guaranteeing the quality of the product due to the lack of product regulations and quality control.

The Greens claim that unregulated production processes allow cannabis products with higher THC (tetrahydrocannabinol) content to enter the market. THC is the main intoxicating ingredient in cannabis and can increase the risk of psychosis when consumed in high doses (Cyril D'Souza et al., 2017; Peltonen, Levole & Niemelä, 2019). Higher THC levels are also often associated with lower CBD levels (Murray et al., 2016). CBD (cannabidiol) is one of the non-intoxicating ingredients of cannabis. CBD might have a decreasing effect of THC and, therefore, a capability to reduce the risk of psychosis (Freeman et al., 2019).

They state that the cannabis available on the unregulated markets has become stronger over time (ElSohly et al., 2016). Lack of state regulation allows producers to freely choose the strength level of the cannabis they grow and sell. Strength and density are advantageous for producers during prohibition because they can be sold in smaller batches. A solution to this would be restriction and taxation according to the following.

“Restrictions and taxation can define less harmful THC and CBD levels, which reduces the harm to public health. Illicitly manufactured and sold drugs are also always an unnecessary health risk, as they may contain additional ingredients or other contaminants that, when used, can result in varying degrees of health damage or, in the worst case, death. Drug-related deaths are a sign of the failure of society’s drug policy” (Vihreät, 2021, para. 2.3. Own translation).

The Greens’ initiative credits the regulatory measures effective in, for example, reducing smoking (Decorte, Lenton, and Wilkins, 2020). In addition, they state that controlling products, prices, and concentrations, locating distribution points, and restricting marketing can ensure equality as the stigma of substance abuse weakens on regulated cannabis markets (United Nations, 2021). From here, one could conclude that the regulative efforts that authorities are currently exercising could be translated to controlling the legal cannabis markets and therefore decreasing the THC levels of the cannabis products currently used.

6.5 Criminal sanctions

Finland has a restrictive drug policy that seeks to reduce the use and distribution of drugs in society through criminalization and control (Egnell, Villman & Obstbaum, 2019). During the last

decade, the attitudes have shifted to emphasize harm reduction. The current Governmental Action Plan on Drug Policy highlights preventive measures, decreasing harm, and protecting basic human rights (Valtioneuvosto, 2016). However, the repressive control regime remains the primary strategy.

Drug offenses are governed by the Finnish Criminal Code (39/1889), which since 1993 has divided drug offenses into three categories: drug-user offenses, narcotics offenses, and aggravated narcotics offenses. There are also regulations for preparing narcotics offenses and abetment of narcotics offenses. The two first-named categories, drug use offenses, and narcotics offenses, are the most frequently used in the cannabis context (Egnell, Villman & Ostbaum, 2019). There is not any legal distinction between cannabis and other illegal substances, but it yields relatively light sentences according to the commonly accepted practice (The office of the Prosecutor General, 2006). Sanctions for the use and possession of cannabis are determined by the Criminal Code (50:2a§), and the most common form of punishment is fining. Yet, larger quantities of cannabis, production, selling, or dealing can lead to imprisonment. Chapter 23 of the Criminal Code (1889/39) concerns drink-driving. It also provides guidelines for drugs. Since 2003, there has been a zero-tolerance for the non-prescription use of narcotic drugs or medicinal substances classified as narcotic drugs on the road (Rönkä & Markkula, 2020).

According to Kainulainen (2012), most individuals who committed drug-related crimes have been reported to have weak socio-

economic backgrounds. This has been considered in the common practice, where police can give a caution or resign from legal action instead of raising charges for a minor drug crime. The act of resigning is commonly used in transgressions where the offender is underaged or heavily addicted. This form of reaction is mostly used in cannabis-related crimes. Cautions remain in the police register for several years after the crime has been committed. This is especially debatable when the offender is young (Egnell, Villman & Obstbaum, 2019).

The legislator has strongly emphasized the special position of young people under 18 and problem drug users. For these groups, the prosecutor must be conscientious about considering the possibility of non-punitive measures, which means that in legal terms, the prosecutor may decide not to prosecute these groups. However, in the case of problem drug users, the Prosecutor General's official guidance (2018) requires efforts to provide treatment and care. Therefore care should be taken to provide treatment and to ascertain willingness to seek treatment before imposing a fine (Rönkä & Markkula, 2020).

The attitudes towards criminal sanctions as an intervention strategy are what most strongly distinguishes the current strategy from the one initiated. As stated earlier, the initiative to repeal the Cannabis Prohibition Act seeks to permit the use, possession, manufacture, and sale of cannabis. Simultaneously, cannabis would be subject to comprehensive regulation like the currently permitted intoxicants, including regulation of sales and manufacture and taxation. It also seeks to remove criminal convictions

related to cannabis use from citizens' personal data records (Vihreät, 2021).

Most of the arguments used by the Greens are based on the beliefs of individual freedom and equality. For example, the Greens' program of principles supports individual freedom and emphasizes an individual's responsibility for their own choices and how they want to exercise their freedom (Vihreät, 2021).

“We Greens have no need to moralize individuals from their choices, for what is most important to us is to change the world through the system level” (Vihreät, 2021, para. 1.5. Own translation).

They state that the current punishment-oriented prohibition law has increased substance abuse and marginalized people as the impact of prohibition hits harder on areas and groups of people at risk of accumulating life problems. The initiative argues that the risk of being caught using cannabis is unequal.

“The likelihood of being caught, fined, or having a record can depend on a person's background or socio-economic factors such as income level, neighborhood, or skin color. In quiet single-house suburbs, the risk of getting caught is not as likely as in a low-income apartment building suburb. The effects of prohibition and legal sanctions are unfairly distributed, especially given the high prevalence of cannabis use in Finland” (Vihreät, 2021, para. 2.4. Own translation).

The Greens also criticize the current legislation for holding the record of the use offenses in the police information system for several years. This can be particularly detrimental and exclusionary for young people as the record might prevent them from obtaining an education or employment.

“One of the aims of green policy is to identify people at risk of exclusion and to combat policies that are already piling up problems for the disadvantaged. Regulating cannabis is one way of preventing exclusion. At the same time, the economic growth and funding for public services that regulation and taxation bring is also a way of compensating the disadvantaged for the problems caused by failed drug policies” (Vihreät, 2021, para. 2.4. Own translation).

Cannabis has been studied widely and from various perspectives. Studies concerning government intervention and the illegal cannabis markets tend to focus on the economic consequences of legalization. Bruno S. Frey published a comprehensive article in 1997 that analyzed the effects of government intervention on drug consumption. The article stated that harder drug legislation does not suppress drug consumption for solely economic reasons. He claims that if there is a demand for drugs at the market, stricter punishments raise the incentives to contradict the prohibition, thereby lessening the deterrence. This can encourage consumers and sellers to either hire better lawyers or bribe the authorities.

Moreover, legislation is designed to align the severity of the punishment with the seriousness of the crime committed. Frey claims

that the European judges are often unwilling to impose high sanctions for minor drug offenses due to the lack of capability to raise the punishments to compensate for the often-low probabilities to capture the offender. For all these reasons, the *effective* expected punishment by drug consumers and dealers is upwardly bounded. Consequently, it is impossible to establish a sufficiently high deterrent to reduce or abolish such activities. Even in cases where the deterrence would work, an extremely high deterrent would not be optimal. Similarly, it would not be socially optimal to minimize the environmental pollution to zero (Frey, 1997).

In contrary, studies have found that a threat of legal sanctions, such as arrest, fines, or incarceration from drug possession, might decrease drug use by raising the risks associated with the drug trade. It might also reduce the number of people initiating drug use. This concept directly affects demand, which is supported by several economic studies (Babor et al. 2010; Pacula et al. 2001; Farrelly et al. 2001; DeSimone and Farrelly, 2003). Kleiman (2009) has proven that adding minimal but specific punishments to felony probationers reduces drug use significantly. The inclusion of regular urine screenings to the probation regime, followed by fines for unclear urines, was enough to motivate most drug-addicted probationers to complete a full year of sobriety.

Babor et al. (2010) identified three research shortcomings worth addressing. First, as previously said, cannabis is the primary drug for which there is a substantial body of evidence about legal changes. Despite being the most extensively used illicit substance, it is not regarded as a significant source of social and

health consequences compared to other drugs. Furthermore, the usage patterns are significantly different in many ways. Second, the assessments are largely concerned with relaxations rather than tightening the legislation. As a result, generalizations to other drugs and significantly tougher law enforcement effects must be avoided. Third, cannabis usage penalties were reduced after a period of harsher penalties, which may continue to influence beliefs and behavioral norms even after the law has changed.

6.6 Analysis of the differences

The main differences between the two policy approaches are summarized in the table below. Finland's current drug strategy combines all the intervention strategies, yet the level of prominence varies between the areas. Therefore, the sections above described how the interventions are conducted in the current system and how the initiative has responded to these actions. This information is complemented with scientific evidence of each of the intervention measures.

The analysis below focuses on the main differences between the policy approaches and their relationship to scientific evidence. Unfortunately, the variability of scientific proof makes it difficult to conclude the effectiveness of the measures. Further analysis is therefore conducted in the following chapters, where the Green's

criticism of the current legislation will be evaluated against justifications based on behavior and negative externalities.

Table 2. Summary of the differences presented in section 6

Policy area	Current strategy	The Green's response
<i>Prevention</i>	Primary responsibility on public authorities, cooperation with non-profit organizations	Preventive measures ineffective due to illegal and unregulated markets
<i>Services for drug users</i>	Substance abuse treatment organized by municipalities	The stigma of illegality hinders getting help for substance abuse problems
<i>Supply control</i>	Cooperation between actors, targeting import and online trade	Problems created by illegal markets, prohibition wastes resources and gives room for corruption
<i>Prescription regimes</i>	Psychoactive substances strictly regulated (exceptions for medical purposes possible)	Unregulated markets allow higher THC-levels, difficult to get a prescription for medical cannabis
<i>Criminal sanctions</i>	Criminalization and control (Harm reduction emphasized)	Permit the use, possession, production and sale of cannabis (Emphasizes individual freedom)

The current action plan on drug policy highlights preventive measures. In practice, substance abuse is not differentiated from the promotion of well-being, health, and safety. This is reflected in the structure of the Finnish legislation, where the drug policies

are incorporated into other themes, meaning that the drug prevention work is carried out cooperatively across sectors. The Finnish institute of health and welfare works closely with other authorities in developing and directing the substance abuse work. This means that the policy-making process relies on scientific evidence of drugs and society, giving room for development without limiting non-factual arguments and political values and beliefs. Finnish police also have a substantial role in the preventive actions, i.e., working closely with schools in their anti-drugs activities and providing information. This section deals with preventative measures in general terms and does not differentiate actions explicitly tailored to prevent cannabis use from other drugs. Therefore, it is difficult to assess the effectiveness of these interventions in the specific case of cannabis. Still, the user statistics provide an estimate of the success rate of these measurements.

The relatively high amount of new cannabis experiments every year would yield success that the current preventive measures are not providing fully effective outcomes. The Greens (2021) share the same concern about cannabis experiments among youth and offers legalization as a solution to the problem where cannabis is more accessible than other illicit drugs due to the illegal and unregulated market. This would mean that controlling the purchasing process on the legal market would function as a preventive measurement and would therefore reduce the accessibility of cannabis. However, minimizing cannabis experimentation might be unrealistic, especially with preventive measures alone, as most of the preventive programs studied have proven ineffective.

Social care accounts for the largest share of drug-related public expenditure, which consists primarily of substance abuse treatment. The services offered to drug users are aimed to reduce overdoses, mortality, crime, social exclusion, and injecting (Rönkä & Markkula, 2020; Kotovirta & Tammi, 2018). As most of these targets are not related to cannabis users, one could assume that cannabis consumers' costs to society are a relatively small share of the total expenditures. Babor et al. (2010) pointed out that only a few interventions are primarily designed for cannabis users. They are often treated with psychosocial interventions that cover issues beyond drug use. Studies have found support for these actions (Stephens et al., 2000; Copeland et al., 2001).

The Greens (2021) point out in their initiative that the stigma of illegality raises the threshold for reporting its use and seeking help. Furthermore, they state that the current healthcare strategy forces patients to either admit to having committed a crime by consuming cannabis as the healthcare sector is often demanding patients to undergo a compulsory drug test as a condition for treatment. Besides this, cannabis use can deny Kela's provision of rehabilitation psychotherapy.

The Finnish drug market has evolved to more organized and professional, as organized criminal groups hold the largest market share. Drugs market is dominated by cannabis products, both smuggled from abroad and home-grown for personal use and

sale. Experts have predicted that the domestic cultivation of cannabis will continue to professionalize as cannabis cultivations often reveal the impose of other drugs, such as narcotics, amphetamines, and ecstasy (Rönkä & Markkula, 2020; KRP 2020a). The Greens have grabbed this problem by reversing the argument of gateway theory against the current prohibition act. They state that the reason why cannabis use can, in some cases, lead to the consumption of stronger drugs is related to the illicit drug market. When cannabis is bought through criminal networks, it creates routes to stronger illicit drugs. According to the Greens, this risk could be reduced by moving the street trade to legal and regulated markets (Vihreät, 2021). The Greens also describe the current supply control efforts as ineffective, as the amount of cannabis use and organized crime are increasing despite the resources put on supply-side interventions. Legalization would exclude criminal organizations from the cannabis market and allow police resources to be re-distributed at combating other crimes (ibid.).

Previous studies of supply control interventions support the argument that the current police and judicial efforts lack a sufficient deterrent effect. Even though most of the studies have little to say about the interventions' effectiveness, in favor of the Greens, they lack evidence of the possible benefits of punishing high-level drug dealers. On the other hand, the effectiveness of supply-side interventions might depend on the epidemic stage of the country or region (Babor et al., 2010). The prevalence of new cannabis users has remained at around 1% throughout the 2010s. This would translate to around 40 000 new cannabis experiments each year, predominantly coming from the age group of 15-24

(Rönkä and Markkula, 2020; Karjalainen et al., 2020). Even though the percentual share has remained the same over the years, the liberalization of opinions about cannabis might suggest that the cannabis markets have the potential to expand in the future. Studies have found that supply control is more effective when the demand for drugs grows, meaning that the supply side interventions are supported by research evidence.

Psychoactive substances are strictly regulated for medical purposes by national and multinational agreements. Cannabis products that seek marketing authorization are subject to the same regulatory requirements as other medicinal products in Finland. This means that a marketing authorization requires research evidence showing that the expected benefits of the medicinal product outweigh the harms at the population level when used in accordance with the instructions and when the existing marketing requirements are met. Only two cannabis-based medicinal products has been granted a marketing authorization on the regulated pharmacy market in Finland. Several other cannabis-based products are sold online, but here, the risk of ensuring the legality of the products rests with the consumer. Untested cannabis-based products are not only illegal in Finland, but also lack certainty that they are safe to use (Pihlainen et al., 2020).

The Greens' initiative sees the current climate as one in which the medical use of cannabis is too restricted. This means that despite the legality of medical cannabis, it is currently too difficult to obtain a prescription. These attitudes are reflected in the doctor's willingness to prescribe cannabis-based medicine and the

poor reimbursement of the drug. According to the initiative, the legalization of recreational cannabis would alleviate the prevailing opinions and make it easier to dispense medical cannabis. They also argue that the difficulty of obtaining a prescription forces patients to commit a crime when cannabis is purchased from illegal and unregulated markets. Legalization would also decrease the THC levels of the cannabis-based products supplied on the market as the current regulative measures of the pharmaceutical field could be translated to the cannabis market (Vihreät, 2021).

According to Babor et al. (2010), changes in costs or level of reimbursement is a standard action to control the demand for a specific medicine. This could be interpreted as actions keeping the demand for cannabis-based products as low as possible to minimize the risk of recreational use of prescriptions. Aaserud et al. (2006) found that reference pricing, in which the price of one item in a category becomes the reimbursement benchmark, results in a rapid shift toward less-priced drugs with a similar impact. Here, it becomes questionable whether cannabis-based medicines are comparable to other treatments in terms of the treatment impact as there is currently only two medicines available on the pharmaceutical market.

The process of the marketing authorization of medical products in Finland is strict, requiring extensive research evidence of the expected benefits of the medicinal products and the possible harms at the population level (Pihlainen et al., 2020). This would

suggest that the current studies of medical cannabis are not extensive enough for more products to be introduced to the market.

Our current drug policy seeks to reduce the use and distribution of drugs in society through criminalization and control, even though the attitudes have shifted to emphasize harm reduction during the last decade (Egnell, Villman & Obstbaum, 2019). The Greens' initiative (2021) seeks to repeal the Prohibition Act and replace it with permitted use, possession, manufacture, and sale of cannabis under comprehensive regulation. They state that the current punishment-oriented prohibition law has increased substance abuse and marginalized people as the impact of prohibition hits harder on areas and groups of people at risk of accumulating life problems. The initiative argues that the risk of being caught using cannabis is unequal. I could not find studies to support the allegation that cannabis users are being treated differently based on skin color or area of residence in Finland. This might indicate that there is no systematic abuse.

There are not any legal distinctions between cannabis and other illegal substances, but it yields relatively light sentences according to the commonly accepted practice (The office of the Prosecutor General, 2006). The common practice of police allows the officers to give a caution or resign from legal action instead of raising charges for minor drug crimes. This is commonly used in transgressions where the offender is underaged. The Greens criticize the current legislation for holding the record of the use of offenses in the police information system for several years. This

can be particularly detrimental and exclusionary for young people as the record might prevent them from obtaining an education or employment.

Scientific studies give controversial results on the effects of prohibition and legalization. Bruno S. Frey stated in 1997 that harder drug legislation does not suppress drug consumption for solely economic reasons. He claims that if there is a demand for drugs at the market, stricter punishments raise the incentives to contradict the prohibition, thereby lessening the deterrence. Frey argues that the European judges are often unwilling to impose high sanctions for minor drug offenses due to the lack of capability to raise the punishments to compensate for the often-low probabilities to capture the offender. For all these reasons, the *effective* expected punishment by drug consumers and dealers is upwardly bounded. Consequently, it is impossible to establish a sufficiently high deterrent to reduce or abolish such activities. This would suggest that the Finnish judicial and police practice of giving low sentences, resigning from legal actions, and referring offenders to treatment would lack the effect of deterrence. In contrast, our legal system emphasizes harm reduction, meaning that despite the lack of a deterrent effect, the current measures can effectively reduce harm.

On the contrary, several studies have found that a threat of legal sanctions, such as arrest, fines, or incarceration from drug possession, might decrease drug use by raising the risks associated with the drug trade. It might also reduce the number of people initiating drug use. This concept directly affects demand, which

is supported by several economic studies (Babor et al. 2010; Pacula et al. 2001; Farrelly et al. 2001; DeSimone and Farrelly, 2003). This would argue in favor of the current legislation, where drug consumption is reduced with criminal sanctions and supply-side tactics.

7. Discussion

Here, the theoretical framework and analysis are being utilized to discuss how the liberal and prohibitive drug policies can be justified or denied according to the behavioral theories and in the light of negative externalities in the Finnish context.

7.1 Behavioral theories and drug policies

The theoretical framework of this thesis is constructed of two different assumptions about individuals' behavior. First, rational addiction theory supposes that individuals make rational consumption choices. This proposes that public policy intervention would not benefit rational consumers because they can make the optimal consumption decisions (Becker & Murphy, 1988; Røgeberg, 2007). When considering the differences between the two drug strategies, the rational addiction theory suggests that an unregulated and illegal drug market would function optimally, and the

alternative of a strictly regulated and legal market would not make an individual better off.

As previously stated, this theory has been critiqued for defining individual behavior inaccurately. Behavioral economics differ from the rational addiction theory by introducing the prospect of decision failure as a rationale for public intervention. This entails altering or changing an individual's behavior for their benefit. The inability to make rational choices can be caused by different biases that can be used to justify different interventions. Present bias occurs when people make a decision that alters their own preferences in the future (Hindricks & Myles, 2013). In the context of cannabis consumption, the decision to initiate the use modifies a future decision to whether to keep using it or quit the use. For example, suppose an individual develops an addiction to the substance. In that case, the future choice between quitting and continuing will become biased from the initial choice, and the decision to keep using becomes the preferred choice. Conformism bias, on the other hand, describes the effect that socially prevailing opinions have on decision-making on an individual level (Hindricks & Myles, 2013).

Prevalence of present bias would suggest that the theory supports preventive policy intervention that targets initiating cannabis consumption. In other words, if the dependence on a substance is disturbing the decision process and causing the decision-maker to make a poor compulsive decision, it is preferable to focus policy measures on preventing what causes this undesirable behav-

ior. Preventive measures attempt to modify the socially prevailing opinions about undesirable behavior, yet studies have shown no evidence of their effectiveness. This would mean that preventive measures are supported theoretically, but the evidence of their effectiveness at a practical level is insufficient.

Behavioral economics emphasizes prioritizing policies that increase individuals' ability to regulate their decision-making (Røgeberg, 2007). This makes sense because the lack of self-control and decision failure are the core causes of drug addiction. Social and health care tailored to drug users are designed to increase the health of abusers and modify the behavior of the patients. Especially cannabis users are often treated with psychosocial interventions that adjust behavior, cognitions, and social components. Studies that have compared psychosocial interventions with an untreated control group have found support for the claim that counseling reduces cannabis use more than no counseling. This would mean that social and health care interventions get supported by behavioral economics and empirical evidence.

Supply control strategies and criminal sanctions can be discussed simultaneously as they both attempt to modify individual behavior through a deterrence effect. As stated earlier, evidence from scientific studies regarding the deterrence effect is controversial. Some researchers say that stricter punishments raise the incentives to contradict the prohibition. Some say that the threat of legal sanctions decreases drug use. Neither way legal interventions have some sort of effect on behavior. One explanation for this inconsistency with the results can be derived from characteristic

differences between individuals. Because the extent of cannabis consumption and the level of rationality of an individual's behavior varies, a specific policy intervention can affect different subgroups of users. Despite having a limited deterrent effect, these interventions play an important role in modifying public opinions at a societal level. A great example of this is the common practice of police, which allows officers to give cautions or resign from legal action instead of raising charges for minor drug crimes, such as cannabis. There are certainly economic reasons behind this, but it also reflects the relatively liberal attitudes towards cannabis compared to other drugs.

If we look at the interventions focusing on the medical field, individual behavior is controlled by the level of reimbursement for cannabis-based medicine. As discussed earlier, changes in costs or level of reimbursement are a common action to control the demand for a specific medicine (Babor et al., 2010). Therefore, the low level of reimbursement of cannabis-based products could signify ambitions to keep the demand for these products minimal. This can be evaluated with the concept of Pareto optimality. Suppose one patient can be better off by getting the reimbursement for cannabis-based medicine instead of a non-cannabis-based alternative without making anyone else worse off. Would this not mean that there is room for a Pareto improvement?

Suppose the rational addiction theory could be seen as supportive of the liberal and unregulated cannabis market. In that case, behavioral economics promotes the current prohibition act if the

society's attitudes towards recreational use of cannabis are negative. This is because cannabis consumption is considered an undesirable behavior, and the current interventions are constructed to minimize this kind of behavior. As stated earlier, attitudes towards cannabis have been liberalized over the years. If this trend continues and recreational use of cannabis becomes acceptable, the arguments used to support prohibition disperses.

If we look at the alternative drug strategy that was detailed in the Greens' initiative, it seeks to repeal the Prohibition Act and replace it with permitted use, possession, manufacture, and sale of cannabis under comprehensive regulations (Vihreät, 2021). The initiative is not comprehensive enough to provide detailed information on the policy decisions after the liberalization, but it stated that cannabis would be taxed similarly to alcohol and tobacco. Taxes are a common tool to correct unhealthy behavior. Taxation could improve the individual's capability to make better choices under present bias. Still, common sense would suggest that its impact would not be as great as other intervention measures under prohibition.

7.2 Externalities and drug policies

The theoretical framework of this thesis presented negative externalities, which can be used to justify policy interventions based on the external costs that externalities create. In the context of cannabis, this means that an individual miscalculates the

whole social cost of their actions, resulting in consumption above the socially optimal level. Therefore, external costs should be included in the decision-making process to avoid a scenario where the calculations used as a basis for decision-making are systematically undervalued (Ekelund & Hébert, 2007; Røgeberg, 2007).

To find the socially optimal level of drug consumption, the externalities need to be identified and quantified (Røgeberg, 2007). Practically, the external costs of cannabis use are compared to the benefits that the consumption is generating for the users. This theory supports prohibition if the social costs of this action are higher than the benefits. In reality, calculations for the socially optimal quantity require comprehensive cost calculations and information about the benefits reported by drug users. Therefore, costs cannot determine which intervention or drug strategy should be used. When deciding on the right policy for a welfare society, economic arguments might become secondary. In this scenario, it's also a question of what kind of society individuals want to live in and society's values and traditions (Røgeberg, 2007).

This is supported by Babor et al. (2010), who emphasized the role of scientific evidence in policy improvements. It can be used to measure the nature of the problem and estimate the possible outcomes. This does not mean that the policymaking process should solely rely on scientists as determining which specific outcomes a society should care about the most depends on the society itself. Scientific evaluations are not a prescription of what a policy-

maker should do but rather an analysis of the expected consequences of exercising a certain option. In practice, scientific evidence is meaningful only in consideration of the goals a policy-maker or society has chosen to pursue.

To assess the effectiveness of the current drugs strategy, I will compare the costs of each intervention strategy to its assumed benefits. This thesis is not trying to provide a comprehensive cost-benefit analysis but rather to discuss the social costs generated by the current drug strategy. We must also consider the social benefit that is caused by cannabis consumption. This benefit is hard to quantify, but the existence of an illegal drug market and regular users prove that cannabis creates value to both users and those involved in the drug market. Social benefits derived from cannabis markets are often monetary for those supplying it. On the other hand, the demand side, constructed by consumers, gain self-reported non-monetary benefits. Due to the challenges of estimating these benefits, the focus of the discussion below will be on the cost side of intervention strategies.

As no breakdown of the costs associated with cannabis use was available, we look at the overall costs of the whole drug strategy and then consider which activities are most burdened by cannabis use. A more comprehensive presentation of the harm-related expenses can be found in chapter 2.4. Direct drug-related harm costs accounted for €299-370 million in 2016 (Jääskeläinen and Virtanen, 2020). These expenses were dominated by social service costs and maintenance of public order and safety. Although the available information on costs focuses only on the costs of

maintaining the health and justice systems, we can get an overall picture of the costs of the current drug strategy, as these two sectors are strongly linked to all intervention strategies. Here, it is also worth mentioning that the healthcare costs contribute to external costs analysis due to our publicly funded health care system. These costs would be easier to consider when making consumption decisions in privately funded healthcare systems, as the individuals themselves would be responsible for covering the costs.

Social care contributed €93 million and €124 million of the total public expenditure on drug-related damage (32 percent). Substance abuse treatment accounted for most of these costs, roughly €67 million. Compared to 2014, the cost of social care drugs increased by roughly 21% in 2016. The cost of drug-related substance misuse treatment accounted for most of the rise (Jääskeläinen and Virtanen, 2020). Despite the high cost of health and social services for drug users, their use is supported by scientific evidence on the effectiveness of the intervention (Babor, room and Strang, 2010).

The costs of drug-related harm in health care include the costs of outpatient and inpatient care costs in specialized and primary health care, which totaled between €37 million and €56 million in 2016. Health care harm costs decreased by 2.6% compared to 2014. The largest share of adverse health care costs, around €26 million, related is to the treatment of drug-related diseases in the inpatient wards of specialized psychiatric hospitals. (Jääskeläinen and Virtanen, 2020). Drug-related pensions and daily

sickness allowances accounted for between €7 million and €23 million in adverse costs. Of these, disability pensions accounted for the largest share of costs (€11 million on average) (Rönkä and Markkula, 2020). Due to the lack of a detailed cost breakdown of cannabis-related expenses, we will not make absolute conclusions about their impact on the healthcare sector. Nevertheless, studies have shown that the most effective treatment for cannabis and moderate-level drug addictions are therapeutic communities, contingency management, and counseling (Babor, Room, and Strang, 2010). This would suggest that the average cannabis-related patient is accounting for outpatient care costs. It is also worth emphasizing that a large proportion of drug users are productive and functioning members of our society (Miron & Zwiebel, 1995). A study conducted in Switzerland discovered that 49 percent of drug users in Zurich were ‘completely integrated’ into society (Muller & Grob, 1992).

The maintenance of organization and security cost roughly €99 million and caused the next highest (30 percent) increase in injury expenses. The judges and prisons accounted for the third-largest percentage of detrimental costs (19%), costing between €63 million and €65 million (Jääskeläinen and Virtanen, 2020). One of the most significant cost factors of the external cost is that narcotics are prohibited. That is drug prohibition results in what is known as control costs. As a result, the effort expended to reduce drug usage and availability generates costs for society, which must be included in policy discussions (Babor et al., 2010).

Miron and Zwiebel (1995) mention that the externality-reducing effects of prohibition depend on that externalities are more associated with heavy use as state intervention affects more casual users. This would mean that prohibition affects more heavy users than those who control their consumption. The link between externalities and hard drug use is also reflected in current drug policies, which are mainly designed to reduce the use of drugs above cannabis. Consequently, legalization would not affect any other measurement areas as significantly as the maintenance of organization and security. However, if cannabis consumption would increase as a result of legalization, it might lead to an increase in cannabis-related.

Theoretically, the problems associated with negative externalities can be corrected by Coase's theorem or taxes. In legal cannabis markets, consumption would be taxed according to the external costs generated by the use. This would mean that the share of external costs would decrease in evaluating socially optimal consumption levels. Tax revenue big enough could potentially make some drug consumption socially acceptable.

8. Conclusion

This thesis aimed to examine the differences between the current drug legislation and the liberal drug policy proposed by the

Greens, using the theoretical framework to argue for or against the two strategies.

Current drug legislation aims to minimize drug use through criminalization and control. Alongside this, the idea of harm reduction has emerged as a step towards a more liberal approach. However, the narrowing gap between liberal and prohibitionist drug policies does not represent a step towards liberalization of cannabis but a change in attitudes.

Societal attitudes towards cannabis consumption played a key role in discussing the two strategies' justifications. The arguments derived from behavioral theories and negative externalities rely on the trade-off between social costs and benefits of cannabis consumption. As behavioral economics can justify prohibitive legislation in correcting harmful behavior, it all comes down to the definition of harmful behavior. A mere change of attitudes would remove the basis for using this theory to justify prohibition legislation and would step in to support liberal legislation. On the other hand, the Green initiative has proposed regulating the legal drug trade through taxation, suggesting that cannabis should be treated the same way as alcohol and tobacco. This again suggests that cannabis cannot be compared to completely harmless substances.

In the analysis of negative externalities, the main argument came down to comparing the social benefits and costs created by cannabis consumption. This theory would support prohibition or legalization depending on the difference between the social costs

and benefits. Both prohibitive measures and liberalization create potential costs for the society, as the consequences of other people's actions tend to be a burden by the society in welfare states. In the light of current data, drug use increases the costs of publicly funded health care and the judicial system, suggesting a high social cost of drug use. However, no conclusions can be drawn from this about the harmful costs of cannabis, as the data used in this study does not distinguish between the social costs of cannabis and other drugs. Besides comprehensive cost calculations, calculations for the socially optimal quantity would require information about the benefits reported by drug users.

This would suggest that the optimal drug strategy for a society could be derived from the values and beliefs of the society in question. Finnish drug legislation is strongly based on scientific evidence, suggesting that change in attitudes would start from deriving more comprehensive scientific research on the effectiveness of current strategies and the possible consequences of legalizing cannabis in a welfare state.

9. Sammanfattning på svenska

Finland har en restriktiv narkotikapolitik som syftar till att minska användningen och distributionen av narkotika i samhället genom kriminalisering och kontroll (Egnell, Villman och Ob-

stbaum, 2019). Under det senaste decenniet har attityderna ändrats till att betona skadereduktion då regeringens nuvarande handlingsplan för narkotikapolitiken lyfter fram förebyggande åtgärder, minskning av skador och skydd av grundläggande mänskliga rättigheter (Valtioneuvosto, 2016). Den repressiva kontrollregimen förblir dock den primära strategin. Däremot godkände de gröna i september 2021 ett initiativ som krävde avkriminalisering av cannabis och var det första partiet i riksdagen som stödde en legalisering av drogen (YLE, 2021; Vihreät, 2021). Initiativet syftar till att avkriminalisera bruk, innehav, tillverkning och försäljning av cannabis och rekommenderar att samma omfattande regleringar (inklusive regleringar om tillverkning, försäljning och skatter) som för andra lagliga substanser ska tillämpas på cannabis. Man strävar också efter att ta bort brottsdomar i samband med cannabisanvändning från medborgarnas dataregister (ibid.).

Denna avhandling fokuserar på hälso- och kriminalitetsaspekterna av den nuvarande narkotikastrategin och den alternativa strategi som föreslås av de gröna. Syftet är inte att finna en absolut sanning om den ena strategins överlägsenhet över den andra, utan att använda innehållsanalys som en strategi för att utvärdera *hur de politiska målen och målsättningarna i de nuvarande narkotikastrategierna skiljer sig från dem som föreslås i initiativet och hur strategierna kan rättfärdigas eller förkastas i enlighet med teorierna om statlig intervention.*

Den teoretiska ramen för denna avhandling utgår från problemet med social välfärdsmaximering och begreppet ekonomisk effektivitet. Dessa två leder till det första välfärdsteoremet, som endast gäller i en så kallad första bästa ekonomi som kännetecknas av perfekt konkurrens, perfekt information, rationella individer, inga externa effekter, fullständiga marknader och icke-snedvridande beskattning. Om något av dessa antaganden inte uppfylls kan den tänkta marknadsjämvikten vara ineffektiv, och statligt ingripande är motiverat för att uppnå effektivitet. De två egenskaper som granskas är antagandet om rationella individer och avsaknaden av externa effekter. För det första används teorin om rationellt beroende för att belysa svagheter i det första välfärdsteoremet när det gäller mänskligt beteende i samband med narkotikamissbruk. Detta avsnitt följdes av beteendekonometri som introducerade begränsad rationalitet som ett alternativt motiv för statliga ingripanden. Beteendekonometri ger ett alternativt perspektiv genom att möjliggöra mer realistiska beskrivningar av individuellt beteende eftersom den introducerar möjligheten till beslutsfel. Den skiljer mellan två typer av misstag som motiv för offentliga ingripanden. Det första misstaget beror på att individer har otillräcklig information för att veta vad som är bäst för dem. Den andra typen innebär att människor vet vad som är bäst för dem, men på grund av bristande självdisciplin kan de inte agera utifrån denna kunskap (Hindricks & Myles, 2013).

För det andra presenteras begreppen externa effekter och externa kostnader för att visa hur en individs beteende genererar kostnader eller begränsar fördelarna för andra på en teoretisk nivå. Ex-

terna effekter kan vara antingen positiva eller negativa, men externa kostnader är vanligtvis ett resultat av en negativ extern effekt. Detta är när den sociala kostnaden för en aktivitet överstiger den privata kostnaden för de individer som deltar i aktiviteten. Externa kostnader, såsom ökad belastning på ett offentligt tillhandahållet hälsovårdssystem eller effekterna av förvärvskriminalitet (MacDonald, 2004), är nära kopplade till produktion och konsumtion av en vara, men denna typ av kostnader är uteslutna från producentens eller konsumentens beslutsfattande. Följaktligen ökar produktionen eller konsumtionen av en vara till en nivå som gör det socialt optimalt att minska produktionen. Detta leder till ekonomisk ineffektivitet eftersom marknadskrafterna misslyckas med att maximera välfärden. Slutligen presenterades Coases teori som en teoretisk lösning på många av de problem som är kopplade till negativa externa effekter, eftersom den hävdar att tydligt definierade äganderätter gör det möjligt för olika parter att förhandla och köpa rättigheter av varandra tills den socialt optimala konsumtionsnivån uppnås.

Babor T.F. et al. (2010) har i sin bok *Drug policy and the public good* kategoriserat strategier och insatser för att minska narkotikarelaterade skador utifrån deras målinriktade politik och bredare politiska mål. Denna kategorisering spelar en viktig roll i avhandlingen eftersom interventionsstrategierna först presenteras och relateras till forskningsresultat om deras effektivitet. Därefter används åtgärdsklassificeringen för att analysera skillnaderna mellan Finlands nuvarande narkotikapolitik och den som de gröna initierat, samt deras förhållande till vetenskapliga bevis på deras

effektivitet. Analysen visar att Finlands nuvarande narkotikastrategi kombinerar förebyggande, skadereducerande, restriktiva och kontrollerande åtgärder, men att graden av framträdande varierar mellan områdena. Tyvärr har variationen i de vetenskapliga bevisen gjort det svårt att dra slutsatser om åtgärdernas effektivitet, främst på grund av svårigheter att skilja cannabisrelaterade åtgärder från andra.

Därefter används den teoretiska ramen och analysen för att diskutera hur den liberala och förebyggande narkotikapolitiken kan rättfärdigas eller förnekas enligt beteendeteorier och i ljuset av negativa externa effekter i den finska kontexten. Motiveringar baserade på beteendeteorier gav kontrasterande resultat. Eftersom teorin om rationellt beroende förutsätter att individer gör rationella konsumtionsval, föreslår den att offentliga politiska ingripanden inte skulle gynna rationella konsumenter eftersom de kan fatta optimala konsumtionsbeslut (Becker & Murphy, 1988; Røgeberg, 2007). Mot bakgrund av min avhandling skulle detta innebära att en oreglerad och olaglig narkotikamarknad skulle fungera optimalt och att alternativet med en strikt reglerad och laglig marknad inte skulle gynna någon.

Den rationella beroendeteorin kan anses att ge stöd för en liberal och oreglerad cannabismarknad. I så fall främjar beteendekonomin den nuvarande förbudslagen endast om samhällets attityder till fritidsbruk av cannabis är negativa. Detta beror på att cannabis konsumtion anses vara ett oönskat beteende, och de nuvarande insatserna är konstruerade för att minimera denna typ av bete-

ende. Som tidigare nämnts har attityderna till cannabis liberaliserats under årens lopp. Om den här trenden fortsätter och fritidsanvändning av cannabis blir acceptabel, försvinner de argument som används för att stödja förbudet.

Om vi tittar på den alternativa narkotikastrategi som beskrivs i de grönas initiativ, syftar den till att upphäva förbudslagen och ersätta den med tillåten användning, innehav, tillverkning och försäljning av cannabis enligt omfattande regleringar (Vihreät, 2021). Initiativet är inte tillräckligt omfattande för att ge detaljerad information om de politiska besluten efter avregleringen, men i det konstaterades att cannabis skulle beskattas på samma sätt som alkohol och tobak. Skatter är ett standardverktyg för att korrigera ohälsosamma beteenden. Beskattning skulle kunna förbättra individens förmåga att göra bättre val. Ändå skulle sunt förnuft antyda att dess effekt inte skulle vara lika stor som andra interventionsåtgärder inom ramen för förbudet.

Förekomsten av negativa externa effekter stöder å andra sidan ett förbud om de sociala kostnaderna för denna åtgärd är högre än fördelarna. I verkligheten kräver beräkningar av den socialt optimala kvantiteten omfattande kostnadsberäkningar och information om de fördelar som narkotikamissbrukarna rapporterar. Kostnaderna kan därför inte avgöra vilken insats eller narkotikastrategi som bör användas. När man beslutar om rätt politik för ett välfärdssamhälle kan ekonomiska argument bli sekundära. I detta scenario är det också en fråga om vilken typ av samhälle individer vill leva i och samhällets värderingar och traditioner (Røgeberg, 2007).

De samhällseliga attityderna hade stor betydelse för de argument som härrörde från beteendeteorier och externaliteter, eftersom de båda bygger på en avvägning av sociala kostnader och fördelar med cannabiskonsumtion. Medan beteendekonomi kan rättfärdiga förbudslagstiftning för att korrigera skadligt beteende, handlar allt om definitionen av skadligt beteende. En enkel attitydförändring skulle ta bort grunden för att använda denna teori för att rättfärdiga förbudslagstiftning och skulle träda in för att stödja liberal lagstiftning. Däremot har de grönas initiativ föreslagit att den lagliga narkotikahandeln ska regleras genom beskattning, och föreslår att cannabis ska behandlas på samma sätt som alkohol och tobak. Detta visar att cannabis inte kan jämföras med helt ofarliga ämnen.

När det gäller analysen av negativa externa effekter handlar huvudargumentet om att jämföra de sociala fördelar och kostnader som cannabisanvändningen ger upphov till. Denna teori tycktes stödja antingen förbud eller legalisering, beroende på skillnaden mellan de sociala kostnaderna och fördelarna. Både förbudsåtgärder och liberalisering skapar potentiella kostnader för samhället, eftersom konsekvenserna av andras handlingar tenderar att belastas av samhället i välfärdsstater. Mot bakgrund av aktuella uppgifter ökar narkotikamissbruket kostnaderna för den offentligt finansierade hälso- och sjukvården och rättsväsendet, vilket tyder på att narkotikamissbruket har en hög samhällskostnad. Det går dock inte att dra några slutsatser av detta om de skadliga kostnaderna för cannabis, eftersom de uppgifter som används i

denna studie inte skiljer mellan de sociala kostnaderna för cannabis och andra droger. Förutom omfattande kostnadsberäkningar skulle beräkningar av den socialt optimala kvantiteten kräva information om de fördelar som narkotikamissbrukarna rapporterar.

Detta skulle tyda på att den optimala narkotikastrategin för ett samhälle skulle kunna härledas från det aktuella samhällets värderingar och uppfattningar. Den finländska narkotikalagstiftningen är starkt baserad på vetenskapliga bevis, vilket tyder på att en attitydförändring skulle börja med att härleda mer omfattande vetenskaplig forskning om de nuvarande strategiernas effektivitet och de möjliga konsekvenserna av att legalisera cannabis i en välfärdsstat.

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