



Study in support of the Controlled Cannabis Supply Chain Experiment

Pre-measurement report

Ralph Mennes, Stijn Hoorens, Margriet van Laar

Karin Monshouwer, Marleen Olthof, Pieter Oomen, Mafalda Pardal, Sander Rigter,
Ruud Roodbeen, Irene Schoonbeek, Ben Senator

Breuer&Intraval is an independent research and consultancy firm distinguished by its people-oriented approach and social commitment. The firm has been conducting research on coffee shops, their policies and related phenomena for more than 30 years. For more information about Breuer&Intraval, visit www.breuerintraval.nl.

RAND Europe is a non-profit research organisation that helps improve policy and decision-making through research and analysis. For more information about RAND Europe, visit www.randeurope.org.

Trimbos Institute is an independent knowledge institute in the Netherlands focusing on mental health, the use of alcohol, tobacco and drugs and on gaming, digital wellbeing and gambling. For more information about Trimbos Institute visit www.trimbos.nl.

© 2023 RAND Corporation, Breuer&Intraval and Trimbos-instituut

All rights reserved. No part of this publication may be reproduced, stored in a retrieval, or made public, in any form or by any means, electronic, mechanical, printout, copy, or otherwise, without the prior written permission of the copyright holders.

Cover: *Floor Fortunati*

Summary

This document is the first research report in the context of ‘the controlled cannabis supply chain experiment’ in the Netherlands.¹ During this experiment, ten ‘intervention municipalities’ will conduct a pilot with the sale of legally grown cannabis.² For this purpose, up to ten commercial cannabis growers will be selected and granted (temporary) exemption from the Opium Act.

The document reports on the methods used and results of monitoring efforts mapping the state of municipal coffeeshop policy, cannabis consumption, the (tolerated) sale of cannabis from coffeeshops and the illegal sale of soft drugs prior to the introduction of the experiment. The field work for this ‘pre-measurement’ took place from September 2021 to April 2022, covering 10 intervention municipalities (where legally grown cannabis will be introduced as part of the experiment) and 9 comparison municipalities (where the closed coffeeshop supply chain will not be introduced)³ that are part of the experiment (collectively, the 19 ‘research municipalities’). The fieldwork and research for this report was conducted and reported by Breuer&Intraval,

RAND Europe and the Trimbos Institute. This research is commissioned by the Research and Documentation Centre (WODC) and conducted at the request of the Ministry of Health, Welfare and Sport and the Ministry of Justice and Security.

Methods

Information was collected for all 19 research municipalities. Fieldwork was conducted in and around coffeeshops in these municipalities, where the number of visitors was counted (950 in total at 124 coffeeshops) and surveys were taken from visitors (a total of 809 visitor surveys at 122 coffeeshops). In each coffeeshop (110 shops in 18 municipalities) the menu with cannabis products was photographed for the purpose of conducting an analysis of the cannabis strains on offer and their prices. A survey was also conducted with people living or working in the immediate vicinity of coffeeshops (388 residents and people working near 129 coffeeshops). An online crowdsourcing survey was conducted to gain insights into the illegal market for cannabis, i.e. sales outside

1 A coffeeshop in the Dutch context refers to a tolerated cannabis retail location.

2 The ten intervention municipalities are: Almere, Arnhem, Breda, Groningen, Heerlen, Hellevoetsluis, Maastricht, Nijmegen, Tilburg and Zaanstad.

3 The nine comparison municipalities are: Enschede, Helmond, Leeuwarden, Leiden, Lelystad, Roermond, Tiel, Utrecht and Zutphen.

coffeeshops.⁴ Respondents were invited to provide anonymous information about their recent cannabis transactions through an online platform. Law enforcement records were also analysed to report on registered incidents and offences complaints in all 19 study municipalities involving nuisance related to alcohol/drugs, possession of hard drugs, possession of soft drugs, trafficking in hard drugs, trafficking in soft drugs, manufacturing of hard drugs and manufacturing of soft drugs.⁵

Coffeeshop policy

All 19 research municipalities have a so-called 'maximum coffeeshops policy', which dictates that the number of coffeeshops may not exceed the established maximum.⁶ Furthermore, all research municipalities have included the *AHOJG* criteria in their local coffeeshop policies,⁷ while the I-criterion (I – only Dutch residents allowed) is adopted in 16 out of 19 research municipalities.⁸ One of these municipalities enforces the I-criterion with high priority, four with low priority and 11 do not actively enforce the criterion.

Supply in coffeeshops

Of the 129 coffeeshops visited, we obtained permission to photograph the menu in 110

shops (85%). The 110 menus contained a total of 3,849 items, of which 2,452 were unique items. All coffeeshops sold cannabis. On average, there were 10.4 unique cannabis items on each menu. The most common strains of herbal cannabis (weed or *wiet*) were: White Widow, Amnesia Haze, Amnesia, Lemon Haze and Silver Haze. The average price per gram of the weed varieties on the menu was € 10.87. The average price for a gram of 'grit' (€ 6.36)⁹ was lower (statistically significant) than that of the regular Dutch cannabis products, while the average price for a gram of import cannabis from the United States was significantly higher (€ 24.99 on average).

Cannabis resin or hashish (**hasj**) was available in 108 coffeeshops out of 110. On average, there were 5.3 unique hash products on the menu. The most common hashish types were Super Polm, Polm, Beldia, Afghaan and Zero Zero. These names (except Afghaan) usually refer to Moroccan varieties. For one gram of the foreign hash on the menu, an average of € 10.67 had to be paid. The average price per gram for domestic hash from the Netherlands (*nederhasj*) was € 14.37. This was not significantly different from the average price per gram of foreign hashish. On average, the number of herbal cannabis products on coffeeshop menus was significantly higher than that of cannabis resin products, but there

4 Crowdsourcing data has been collected between September 1st 2021 and August 31st 2022.

5 The Opium Act distinguishes between soft and hard drugs: Schedule I lists the substances classified as hard drugs, for example heroin, cocaine, amphetamine, ecstasy and GHB. Schedule II lists the substances classified as soft drugs: cannabis products and sleeping pills and sedatives.

6 Municipalities with a 'maximum policy' have included in their coffeeshop policy a maximum number of coffeeshops that may operate within their jurisdiction (i.e., 'the established maximum').

7 The sale of cannabis products in coffeeshops is governed by a so-called 'tolerance policy' in the Netherlands. Coffeeshops will not be prosecuted and receive a licence to sell cannabis from the municipality if they comply with the national (AHOJG) and locally set criteria. The AHOJG criteria include: A – no advertising; H – no hard drugs; O – no nuisance; J – no minors; and G – no more than 5 grams per purchase.

8 The I-criterion states that only residents of the Netherlands have access to the coffeeshop and soft drugs may only be sold to them.

9 Grit usually refers to a mix comprising of the rest product of various types of Dutch weed.

was no statistically significant difference in the average price per gram of hash and weed.

Pre-rolled joints (pre-rolls) were sold in 105 coffeeshops. The average coffeeshop had 6.3 unique joint products on its menu. 30% of the coffeeshops sold joints without tobacco in addition to joints with tobacco. On average, there were 5.9 unique pre-roll products with tobacco on the menus. This was significantly higher than the average number of unique pre-roll products without tobacco per menu (2.1). On average, pre-rolls with tobacco cost € 4.58 per joint, while pre-rolls without tobacco cost on average € 5.37.

Edibles were sold in 35% of the visited coffeeshops.¹⁰ On average, these coffeeshops had 3.2 unique edibles on the menu. Because this was a wide variety of products, the price per item also varied considerably (€ 8.85 on average). CBD cannabis or hashish¹¹ were on sale in 26 of the 110 coffeeshops (23.6%). The average price per gram of CBD products was € 6.63.

Coffeeshop visitors: characteristics, buying behaviour and use

Our fieldwork in and around 124 coffeeshops showed that the cannabis retail points welcome on average 650 visitors per day. This corresponds to the sales of approximately 1,300 grams cannabis on average per coffeeshop per day. Most visits occurred in the afternoon or evening. In addition to counting visitors, a survey was conducted with respondents in or near the coffeeshop who had just completed a purchase at the shop. The average age of respondents was 32 years. Three quarters of the respondents had bought

weed prior to taking the survey, 20% had bought hashish and 5% had bought both weed and hash. A small percentage (<5%) reported having made cannabis purchases outside shops in the 30 days prior to taking the survey (e.g., on the illegal market or at pharmacies to obtain cannabis for medicinal use).

The three main reasons for purchasing cannabis (both for weed and for hash) in the coffeeshop they had just visited prior to taking the survey were: 1) convenient and easily accessible location, 2) sale of high-quality cannabis, and 3) good atmosphere/hospitality/friendly staff. On average, respondents who purchased weed spent € 19, and respondents who purchased hashish spent € 16. The most common expenditure per transaction for both cannabis and hash was € 10.

Most respondents (89%) said they were (very) satisfied with the cannabis products from the shop they just visited. Respondents' satisfaction was associated with the perceived high quality of cannabis (51%), the desired effects of the cannabis product (23%) and the consistent quality/strength/quantity of the cannabis product (12%). Dissatisfied respondents cited varying quality/strength/quantity of the cannabis product (36%), limited quality (24%) and poor price/quality ratio of the cannabis product (24%) as explanations.

Over two-thirds (70%) of respondents who consumed hash or weed in the 30 days prior to taking the survey did so on 20 days or more. The proportion of frequent users in this measurement is relatively large compared to previous research (such as the National Drug Monitor 2022). This sample does not provide a representative picture of the entire population of coffeeshop visitors, as the more frequent visitors are overrepresented in this survey.

10 Edibles are edible cannabis products that are not sold as concentrates, oil or supplements.

11 It is assumed that these products contain little to no THC.

More than half of the coffeeshop visitors (59%) said they had only used weed in the 30 days prior to taking the survey, 15% said they used weed most of the time. In addition, about 1 in 8 coffeeshop visitors (13%) said they had only used hashish in the 30 days prior to taking the survey; 5% mostly used hashish. Finally, 8% said they used hash and weed about as often. The vast majority (94%) of the group 'last-month users' used hash or weed in a joint (with tobacco). Furthermore 1 in 20 (5%) respondents used pure hash or weed as a cigarette (without tobacco). In addition, 4% used hash or weed in a pipe and 3% in a 'heat-not-burn' vaporiser.¹²

Over 8 in 10 coffeeshop visitors who used cannabis in the 30 days prior to taking the survey always or mostly did so for recreational purposes. Nearly a quarter of respondents reported to a following that they were always or mostly using cannabis for medicinal purposes, a minority of whom were given the cannabis on prescription.

Almost two-thirds (65%) of coffeeshop visitors scored positive on a screener for risky cannabis use.¹³ A possible explanation for this is that mostly frequent visitors were surveyed. Thus 8 per cent of respondents said they had been unwell or had an accident while or after using cannabis in the 12 months prior to taking the survey. These mostly related to nausea/vomiting (30%) losing consciousness (20%) and having anxiety or a panic attack (18%).

When asked whether people had sought help to stop or reduce their use of hashish or weed in the 12 months prior to taking the survey, 90% replied that they had not. 'Seeking help' mostly involved browsing the internet, or seeking help

from addiction care, from GP or psychologist and from friends or family.

Quality of life around coffeeshops

The survey among residents and people working in the vicinity of coffeeshops revealed that they are generally satisfied with living/working in that neighbourhood (88%). Two thirds (65%) of respondents said that there are occasional incidents around the coffeeshop that might affect the neighbourhood. These incidents mainly concern disorderly traffic, noise disruption and nuisance from loitering. However, residents generally do not attribute these incidents to the activities of the coffeeshop located in the neighbourhood. Two thirds (68%) of these respondents indicated that these incidents have a negative effect on their quality of life. Residents and people working in the vicinity of coffeeshops generally feel safe in the neighbourhood. On average, 76% of the respondents did not feel unsafe in the neighbourhood in the past six months. They rate the safety level 7.3 on average on a scale of 10.

Law enforcement registration data

The study team requested data about registered incidents and offences in relation to soft and hard drugs in the 19 study municipalities from law enforcement authorities in the Netherlands. These were then compared to the average number of incidents and reports registered in all other Dutch municipalities. The number of reported incidents of public disorder related to alcohol and/or drugs was significantly higher in the study municipalities than the average in the

12 In a 'heat-not-burn' vaporiser, the tobacco/cannabis is heated, but not burnt. E-cigarettes also fall into this category.

13 Risky cannabis use is measured using the CAST (Cannabis Abuse Screening Test). This questionnaire consists of six items asking about cannabis use in the past 12 months.

Dutch municipalities. This can be explained by the fact that all study municipalities fulfil a central function in their region. They host facilities that are also being used by residents from surrounding municipalities. Incidents, offences or crimes related to the possession, trafficking or manufacture of soft drugs (such as cannabis) were limited in both the research municipalities and the other municipalities in the Netherlands. For possession of hard drugs (such as cocaine), on average, more incidents and crimes were registered in the study municipalities than in the other Dutch municipalities. The number of incidents, offences and crimes related to trafficking or manufacturing hard drugs was relatively low compared to the other categories of incidents and offences that were studied.

Illegal market

To gain insights into the illegal market for cannabis, we conducted a survey on cannabis transactions outside coffeeshops. The study team used an online survey based on self-selection of respondents who had purchased cannabis outside a coffeeshop. The survey covers purchases made in the last month in the study municipalities. It showed that price (70%), price-quality ratio (53%), being able to buy larger quantities than the maximum purchase amount of 5 grams per transaction (37%) and a fast delivery service (34%) were the main reasons for buying cannabis outside a coffeeshop. Respondents who buy cannabis outside a coffeeshop mainly made the purchase through a delivery service (40%). It also appeared that respondents mainly bought herbal cannabis (58%), whereas one in five respondents (20%) bought hashish and

another one in five purchased both weed and hash (22%). The types of weed and hash that were most purchased largely correspond to the results of the survey of coffeeshop visitors. Just like coffeeshop visitors, illegal buyers were satisfied with the cannabis product they bought outside the coffeeshop, both in terms of price-quality ratio, effects and taste/smell.

Respondents were asked how many grams of cannabis they bought outside a coffeeshop. Because the actual weight of the transaction may differ from what the dealer tells them, a photo card was used showing different volumes of cannabis. Respondents were asked to indicate which photo most closely corresponds to the amount of cannabis they purchased. A considerable difference (without a clear direction) was found between the self-reported weight and the weight estimated via the photo card. Outside the coffeeshop, people are not bound by the maximum sales quantity of up to five grams per transaction. Nevertheless, even on the illegal market, the total weight per transaction is usually limited. 62% (weed) and 70% (hash) of the transactions involved purchases of less than 10 grams. In less than a tenth of transactions, more than 50 grams were sold. The average price of a gram of weed outside the coffeeshop is € 7, while the average price for hashish is € 6.¹⁴

In sum

Regarding their coffeeshop policies, the 19 research municipalities appear to be representative of the more than 100 Dutch municipalities with coffeeshops; they all have a maximum policy and have included the **AHOJG** criteria in the policy.

14 The average price paid in coffeeshops for a gram of domestic weed (*nederwiet*) was € 10.87. Grit, outdoor weed and import weed were cheaper, while US weed was more expensive. The average price paid in coffeeshops for a gram of import hashish was € 10.67. The average price for a gram of domestic hash (*nederhasj*) was € 14.37.

The menu card analysis showed that on average there is more weed than hash on the menus of coffeeshops. This is in line with findings from previous research that most cannabis consumers prefer weed over hash. In general, customers are (very) satisfied with the cannabis they buy in the coffeeshop. They are mainly satisfied with the high quality of the purchased product.

Almost two thirds of the surveyed coffeeshop customers scored high on risky 'cannabis use'. A relatively high percentage (almost a quarter) of visitors also appear to use cannabis always or mostly for medicinal purposes. Health incidents due to cannabis use are relatively rare.

This study shows that hardly any nuisance caused by the coffeeshop and/or its visitors is experienced in the immediate vicinity of the coffeeshop. This is in line with many studies on the quality of life in neighbourhoods around coffeeshops in recent years (such as the *Monitor ontwikkelingen coffeeshopbeleid*). For users buying cannabis outside the coffeeshop, the price and/or price-quality ratio seems to be a decisive factor for buying on the illegal market, i.e. outside coffeeshops. These purchases are mainly made from delivery services and more often involve cannabis than hashish. In general, respondents are satisfied with the product they bought outside the coffeeshop.