Dossier 4: Effects of the Cannabis Legalisation in Germany on Cross-Border Dynamics (PREMIUM-study)

Cross-Border Impact Assessment 2024

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Contents

Empirical results

Data collection was carried out through the distribution of a survey and the conduction of expert interviews[1]. In this section, we discuss the survey component. A total of 153 respondents completed the questionnaire. After data cleaning (i.e., taking out cases with missing values, removing impossible responses, etc.), a total of 72 usable cases remained for us.

Of these 72 cases, only 2 did not mention from which area they originated. The genders seem to be equally divided (Figure 1). Although, 3 cases were filled in by non-binary or third gender participants, making it difficult to infer results for this population. Furthermore, 87.5% of respondents were 34 years of age or younger, which could have an impact on the findings (Figure 2). Lastly, all of the regions are well-represented within the small sample with the German and Belgian border regions garnering an equal amount of 19 respondents and the Dutch region being relatively over-represented with 32 cases (Figure 3).
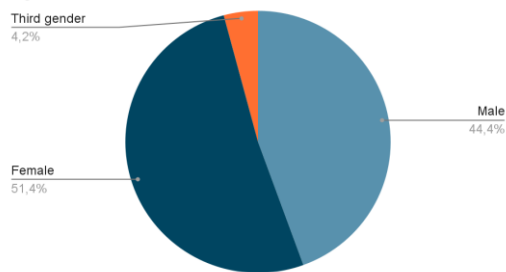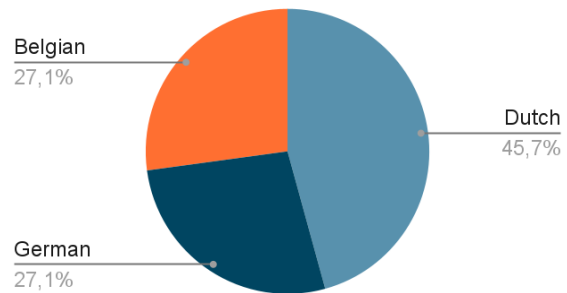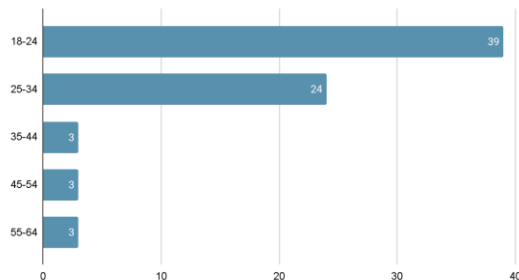
Figure 1. Gender

Figure 3. Nationality

Figure 2. Age categories

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[1] For a more detailed description of the interviews conducted for data collection, please refer to the section "Interviews Conducted" under "Objectives & Methods."

1. Introduction

This study falls within the context of the efforts of the German national government to legalise cannabis up to a certain degree. This topic was widely discussed and debated upon within the government, with an extensive sharing of advantages and disadvantages of such a proposal. Ultimately, the government voted on the proposal and the legalisation came through. This passing of the proposal occurred in the middle of this study, causing the researchers to have to amend the planned analysis of this "proposed" legalisation's effects. As clear data is, unfortunately, not yet available and therefore not reliable nor valid for this study, the focus was put on receiving input from the public and intriguing individuals in this field by respectively sending out a survey for people living in the Euroregion Meuse-Rhine (EMR) and doing interviews with individuals ranging from a mayor and a police officer to a social scientist, all experts in their respective fields supposedly (in)directly impacted by such a legalisation.

The EMR is known for its cooperation and societal intermingling, also across borders. Moreover, as the EMR is densely populated and harbours three countries in a relatively confined area, it can be expected that a change in German national legislation can have significant impact on the border regions with the Netherlands and Belgium.

Many studies on organised crime are based on data collected in one specific country. Despite the fact that much drug-related organised crime is transnational by nature, many scholars are unable to get access to data in various countries and focus on the situation in their own country. As a result, cross-border aspects of drug trafficking are often neglected.[2]

In addition to this, it is reasonable to infer that in the future years changes will be noticed not only in Germany, but also in other border regions. Ranging from health policies and protection, to freedom of movement, drug tourism, addiction and criminal conduct, this paper aims to identify some possible consequences of legalisation of cannabis in Germany, by taking a broad approach and backing up hypotheses with evidence-based insights.

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[2] Noack, J. & Nelen, H. (2023). Drug-related organized crime in the Meuse Rhine EU-region and the role of national borders. In: Nelen, H. & Siegel, D. (eds.) (2023). *Organized crime in the 21st century: Motivations, Opportunities and Constraints*. Switzerland: Springer Cham, p. 63-83.

2. Objectives & Methods

2.1 Current or Future Effects: Ex-post or ex-ante

As the proposal was passed during the research, ex-post information cannot be reliably and validly presented as it mainly originates from assumptions and predictions. Moreover, information on, for example, societal and economic impacts can only be trustworthily analysed and reported when the imminent changes due to the legalisation have fully taken hold physically and in society. Thus, accurate findings on the actual effects of the legalisation ex-post can unfortunately not be presented in this Cross-Border Impact Assessment.

Nonetheless, this research is fully committed to mapping the potential effects of the German cannabis legalisation in an ex-ante format. This means that the possible future effects will be identified and evaluated through the comparison of actual real-life input (indicators) from the public and specifically relevant individuals in this field of research to benchmarks in society and academics where this form of legislation and its effects have already taken place or have been academically reviewed. In the end, the benchmarks and collected input from the indicators will be collectively evaluated to ultimately synthesise the findings into a cohesive conclusion of expected future effects of the legalisation. This conclusion of potential effects, based on the evaluated findings, will then form the backbone of the Cross-Border Impact Assessment.

2.2 Interviews Conducted

In addition to the survey (*see* Empirical Results), we conducted nine in-depth expert interviews (n=9) with professionals from various backgrounds and workplaces across cities in Belgium, the Netherlands, and Germany (*see* Table 1). The interviewees included individuals with expertise relevant to the legalisation of cannabis, ranging from a criminologist providing a legal perspective to the mayor of Kerkrade discussing political and societal implications.

Table 1. Interviews conducted[3]

#	Profession	Workplace	Pseudonym/ Real name[4]
1	Police officer	Maastricht, the Netherlands	Leonie Bouwknegt
2	Psychopharmacology scientist	Maastricht, the Netherlands	Dr. Eliza de Sousa Fernandes Perna
3	Cross-Border Cooperation Officer	Heerlen, the Netherlands	Cross-border officer
4	Criminologist	Maastricht, Netherlands	Hans Nelen
5	Municipality Maastricht	Maastricht, the Netherlands	Municipal worker
6	Mayor Kerkrade	Kerkrade, the Netherlands	Petra Dassen-Housen
7	Social scientist	Frankfurt, Germany	Social scientist
8	Retailer Medical Cannabis	Aachen, Germany	Salesman Medical Cannabis
9	President of the Parti Socialiste (PS) and mayor of Charleroi	Charleroi, Belgium	Paul Magnette

2.3 Demarcation: Defining the Territory of the Research

For the demarcation of our study, we opted for the Euregio Maas-Rhein (EMR) (*See* Map 1). This territory presents an excellent case-study as there is a high prevalence of robust economic activity, marked by numerous businesses and a significant population of cross-border commuters. This presents an intriguing opportunity to examine the potential impact of cannabis legalisation on, among others, businesses, their establishment, and workers. Furthermore, given the region's intricate network of borders and its historical

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[3] The colours of the table indicate the different countries of the workplace.
[4] Since some individuals preferred to remain anonymous in the report while others did not mind being identified, pseudonyms are used for those who requested anonymity, and real names are used for those who consented to being named.

association with smuggling and various forms of trafficking[5], it becomes imperative to scrutinise the dynamics of trafficking and tourism within this context. Several factors contribute to this phenomenon: firstly, the close geographical proximity to national borders allowing for relatively essay trafficking of humans and drugs[6]; and secondly, its central location amidst European hubs such as the ports of Rotterdam and Antwerp, as well as its adjacency to multiple airports facilitating long-distance trafficking[7]. This raises the question how the legalisation in Germany impacts cross border trafficking and law enforcement strategies regarding the matter.

A "Euregio" refers to a cross-border region where policies and objectives are formulated collaboratively by regions from different countries. Unlike a border region, which focuses on the interests of a single nation or region, a Euregio develops strategies from a cross-border perspective. This approach allows Euregios to address shared challenges and goals, demonstrating a collective effort to promote regional development across national boundaries.[8]

Map 1. The Euregio Meuse-Rhine[9]

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[5] Noack, J., Nelen, H. (2023). Drug-Related Organized Crime in the Meuse Rhine Euroregion and the Role of National Borders. In: Nelen, H., Siegel, D. (eds) *Organized Crime in the 21st Century* (pp. 63-83). Springer, Cham. https://doi.org/10.1007/978-3-031-21576-6_5

[6] Spapens, T., Kolthoff, E., & Stol, W. (2016). Georganiseerde misdaad in de 21ste eeuw. *Tijdschrift voor Criminologie, 58*(2), 3.

[7] Geurtjens, K. (2022). Outlaw Motorcycle Gangs in the Meuse Rhine Euregion: Exploration of the phenomenon, related crime and the public response. *Maastricht: Maastricht University*.

[8] Unfried, M. (2023). *Cross-border Impact Assessment 2023, Dossier 2: Transnational Infrastructure projects: Ambitions, sectors, instruments and effect on border regions.* ITEM Cross-Border. https://crossborderitem.eu/wp-content/uploads/2023/11/Grefrap23-D2-EN.pdf

[9] Euregio Maas-Rhein. (n.d.). *Organisation.* https://euregio-mr.info/nl/ueber-uns/organisation/

The EMR is characterised by dynamic cross-border cooperation and originated in 1976. It comprises five partner regions from three EU member states: the German *Zweckverband* (Association) Region Aachen, the Dutch Province of Limburg, the Belgian Provinces of Limburg & Liège, and the German-speaking part of Belgium. Spanning 10,700 square kilometres across Germany, The Netherlands, and Belgium and counting approximately 4 million inhabitants. The EMR thrives as a hub of economic activity, boasting 43,000 cross border commuters of a total of 1.9 million employees across 246,000 companies, along with a robust education and research sector that includes 128,000 students, 22 universities and university colleges, and 300 research entities. Strategically interconnected by an extensive transportation network, including 8 airports, 2 high-speed railway stations, and the prominent inland port of Liège, the EMR offers a blend of, amongst others, academic and economic activity.[10]

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[10] Ibid.

3. The Research Themes, Principles, Benchmarks and Indicators of the Dossier

3.1 The Research Themes of the Dossier

Aligned with ITEM's methodology, our focus encompasses three key themes: i) European integration, ii) sustainable and socio-economic development, and iii) euregional cohesion. Several principles have been identified based on these themes, all examined in the context of our main research topic—the cross-border impact of Germany's cannabis legalisation.

European integration is relevant in this report, as it underscores the interconnectedness and regulatory alignment among EU member states. Through the process of European integration, countries within the EU have developed a shared legal framework that facilitates the free movement of goods, services, people, and capital. The legalisation of cannabis in Germany will not only impact its national policies but also potentially influence neighbouring countries due to this integrated legal and economic structure. This integration ensures that changes in one member state, such as Germany, have ramifications throughout the EU, necessitating a coordinated response to address specific issues.

The topic of **sustainable and socio-economic development** is highly relevant for the potential cross-border effects of the German cannabis legalisation as the potential effects can range from economic impact and sustainability concerns to a change in social dynamics and overall societal thinking. For example, trend differences in tourism and criminality can be assumed after legalisation, as presumably both increases and decreases can be argued. Furthermore, the topics of addiction prevention, consumer protection, and economic development in entrepreneurship are also very relevant and intriguing to dissect in this theme field.

Euroregional cohesion fits the scope of the present report as it highlights the need for coordinated regional development and policy alignment to manage disparities and promote harmonious development. The legalisation of cannabis in Germany could exacerbate existing regional disparities and create new challenges related to drug smuggling and organised crime, especially in border regions with differing cannabis policies. Effective judicial cooperation and cohesive regional policies are essential to address these issues, prevent the exploitation by organised crime, and ensure that the benefits of legalisation do not lead to negative cross-border effects.

3.2 Principles, Benchmarks, and Indicators for Establishing a Positive Situation in Cross-Border Regions

Table 2. Themes, Principles, Benchmarks, and Indicators.

Themes	Principles	Benchmarks	Indicators
European integration	Freedom of Movement (for individuals, workers, right of establishment (for individuals and businesses). Internal Market for Cannabis Products and Services.	Intra-EU Migration Patterns: Observing potential changes in migration patterns, especially at the borders, in response to cannabis legalisation. Cross-border Labour Mobility: Investigating whether the German cannabis market specifically attracts workers from neighbouring countries like the Netherlands and Germany. Cross-border Establishment: Assessing potential changes in the establishment of cannabis-related businesses in Germany by individuals from neighbouring countries.	*Quantitative*: (1) Statistics on intra-EU migration and labour mobility involving Belgium, the Netherlands, and Germany, especially looking at trends to the Netherlands before legalisation. (2) Data on cross-border labour mobility within the cannabis industry among the Netherlands, Germany, and Belgium. *Qualitative*: (1) Literature reviews on factors influencing migration flows within the cannabis-related industry. (2) Surveys and interviews with relevant stakeholders to assess the perceptions of economic benefits and the impact of legalisation.
	Health and protection of public health (prevention and education).	Analysing effectiveness of existing campaigns and prevention actions. Are the measures related to public health, prevention, and education in KanG will be effective and influence people elsewhere in the defined territory? Comparative analysis of existing public health campaigns and educational programs. Situation today in NL/BE/DE: quality of cannabis	*Quantitative*: (1) Statistics on cannabis use and related public health issues (e.g., addiction rates, driving under the influence) in the region pre- and post-legalisation. *Qualitative*: (1) Expert opinions on the effectiveness of public health measures and educational programs in the region. Statistics on "health issues" related to "bad" cannabis products?
Socio-economic and sustainable development	Tourism (impact of cannabis liberalisation on tourism	Tourist motivations (for visiting the region, with a specific focus on cannabis tourism).	*Quantitative*: Surveys questioning change in buying behavior of cannabis. *Qualitative*:

	trends in the regions)	Regulations and changes in patterns concerning tourism in other countries.	Interviews with stakeholders (e.g. civil servant of municipalities) Study of relevant literature
	Criminal proneness pre- and post-legalisation.	Crime patterns today in relation to Cannabis in the EMR. Crime patterns in other countries post legalisation (for both adults and youths).	Expectation of police officer(s) and other professionals (e.g., criminologist). Review of scientific literature.
	Addiction exposure	Current health statistics in cannabis-related topics and areas. No increase in cannabis use among youth.[11]	Expectation of scientist(s) (interview) Expectation of healthcare employee(s) (survey/interview) Expectation of the general public (survey) Gauge perceptions regarding the potential negative implications of legalisation on minors due to effects on parents (survey). Measure perceptions and attitudes towards youth cannabis use (survey).
	Consumer protection, safety and of consumers	Compliance with Consumer Protection Laws and Standards Likeliness of self-reported anxiety and depression increases with higher potency THC[12]. Illegal cannabis less expensive and more THC potent after 2018 legalisation in Canada[13]	Expectation of legislation impact on quality of cannabis Expectation of legislation impact on consumer protection and safety
	Economic developmen	Adapting of tourist facilities to meet the needs of drug tourism[14]	*Quantitative:* How many coffee shops are located in the border region?

[11] Leung, J., Hall, W., & Degenhardt, L. (2020). Adolescent cannabis use disorders. In *Adolescent addiction* (pp. 111-135). Academic Press.

[12] Martin-Willett, R., Skrzynski, C. J., Karoly, H. C., Elmore, J. S., & Bidwell, L. C. (2023). Baseline affective symptomatology moderates acute subjective effects of high potency THC and CBD cannabis concentrates. *Experimental and Clinical Psychopharmacology*, *31*(6), 1039–1049. https://doi.org/10.1037/pha0000667

[13] Mahamad, S., Wadsworth, E., Rynard, V., Goodman, S., & Hammond, D. (2020). Availability, retail price and potency of legal and illegal cannabis in Canada after recreational cannabis legalisation. *Drug and Alcohol Review*, *39*(4), 337–346. https://doi.org/10.1111/dar.13069

[14] Hoffman, B. (2014). Drug consumption tourism as a social phenomenon. *Trakia Journal of Sciences*, *12*(4), 455–460. https://doi.org/10.15547/tjs.2014.04.017

	t of border entrepreneurs		*Qualitative:* Expectation of legislation impact on local businesses Expectation of legislation impact on economic opportunities
Euroregional cohesion	Principal of good cross-border policy cooperation	Situation today: Cooperation in other sectors Ideal cooperation regarding soft-drugs	*Qualitative*: Quality of cooperation with respect to cannabis trafficking, illegal production, etc. Review of scientific literature.
	Friendly neighbourhood relation	European cooperation to safeguard livability in residential areas	*Qualitative*: Expectation of legislation impact on political cooperation across the border on a regional level
	Cross-border trafficking and law enforcement.	Cross border surveillance, efforts surveillance, efforts of law enforcement across the border regions, sharing of investigative information.	Explanation of practices and cooperation strategies from law enforcement officials (interviews). Review of scientific literature.
	Social perception.	Popular opinions on the consequences of the new law in border regions. What do people think will be the repercussions on their lives?	*Quantitative*: Respondents perception of cannabis according to survey results. *Qualitative:* Experts' point of view on changes in social perception. Review of scientific literature.

4. Evaluation of the European Integration theme

Freedom of movement, workers, right of establishment, internal market

4.1.1. Principle : Definition – The internal market and free movements

This section examines the effects of the liberalization of recreational cannabis in Germany on Germany, Belgium, and the Netherlands, with a particular focus on the Rhine-Meuse euro-region, in terms of labor mobility, intra-EU migration, and economic impacts.

4.1.2. Intra-EU migration EU movers and labour mobility withtin the EU : Flux and factors - Focus on the EU, especially the Netherlands, Germany and Belgium

Several studies have identified and categorized the motivations behind migration among European citizens to other European countries. There are five primary reasons: work-related considerations, family-related considerations, study-related reasons, the desire to gain new experiences or learn a language, and environment-related considerations, such as climate[15].

In its 2023 Annual International Migration Outlook, the OECD analyzed recent developments in migration patterns by country, providing insights into immigrant stocks and flows, labor market impacts, and migration policies. This report highlights a significant intra-EU migration between Germany, Belgium, and the Netherlands[16].

Furthermore, within the EU, the majority of cross-border workers possess a medium level of education (54%), compared to those with a high level of education (34%) and those with a lower level of education (12%)[17].

Focus on the Netherlands

Since the Netherlands has tolerated the recreational use of cannabis for years, it is pertinent to focus on the Netherlands itself to determine whether this tolerance has increased migration from Belgium and Germany to the Netherlands. Notably, the Netherlands ranked as the fourth most popular destination in Europe in 2021, and the OECD's annual International Migration Outlooks from 2006 to 2023 indicate that the percentage of individuals benefiting from free movement remains relatively constant in the

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[15] Fajth. V., Marchand. K. & Siegel. M., (2009). *Monitoring and Mapping Migration in the EU with Existing Data* (Working Paper). Role of European Mobility and its Impacts in Narratives, Debates and Reforms. https://www.reminder-project.eu/wp-content/uploads/2019/11/D2.6.pdf.

[16] Organisation for Economic Co-operation and Development (OECD) (2023). *International Migration Outlook 2023*. (Report 18rd ed.,). OECD Publishing. https://doi.org/10.1787/b0f40584-en.

[17] EU and EFTA movers : EU or EFTA citizens who reside in an EU or EFTA country other than their country of citizenship. (*Annual report on intra-EU labour mobility 2022 (*Report).
 ; European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Hassan, E., Siöland, L., Akbaba, B. (2023). *Annual report on intra-EU labour mobility 2022 (*Report)*. Publications Office of the European Union. https://data.europa.eu/doi/10.2767/560178

Netherlands. Germany consistently appears in every report as one of the top ten nationalities emigrating to the Netherlands[18].

In 2021, individuals from EU/EFTA countries immigrated to the Netherlands for the following reasons: labor (38,860 individuals, representing 33%), family (29,350; 25%), other and unknown reasons (28,240; 24%), and education (21,125; 18%). Other factors include economic disparities, wage differentials, cross-border partnerships, socio-cultural differences, and historical ties[19].

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[18] European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Hassan, E., Siöland, L., Akbaba, B. (2023). *Annual report on intra-EU labour mobility 2022 (*Report)*.* Publications Office of the European Union. https://data.europa.eu/doi/10.2767/560178 ; EU and EFTA movers : EU or EFTA citizens who reside in an EU or EFTA country other than their country of citizenship. (*Annual report on intra-EU labour mobility 2022 (*Report) ; OECD (2006). *International Migration Outlook 2006*. (Report 1st ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2006-en. OECD (2007). *International Migration Outlook 2007*. (Report 2nd ed.,). OECD Publishing. https://www-oecd-ilibrary-org.mu.idm.oclc.org/social-issues-migration-health/international-migration-outlook-2007_migr_outlook-2007-en. OECD (2008). *International Migration Outlook 2008*. (Report 3rd ed.,). OECD Publishing. https://www-oecd-ilibrary-org.mu.idm.oclc.org/social-issues-migration-health/international-migration-outlook-2008_migr_outlook-2008-en. OECD (2009). *International Migration Outlook 2009*. (Report 4th ed.,). OECD Publishing. https://www-oecd-ilibrary-org.mu.idm.oclc.org/social-issues-migration-health/international-migration-outlook-2009_migr_outlook-2009-en. OECD (2010). *International Migration Outlook 2010*. (Report 5th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2010-en. OECD (2011). *International Migration Outlook 2011*. (Report 6th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2011-en. OECD (2012). *International Migration Outlook 2012*. (Report 7th ed.,). OECD Publishing. https://www-oecd-ilibrary-org.mu.idm.oclc.org/social-issues-migration-health/international-migration-outlook-2012_migr_outlook-2012-en. OECD (2013). *International Migration Outlook 2013*. (Report 8th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2013-en. OECD (2014). *International Migration Outlook 2014*. (Report 9th.,). OECD Publishing. https://www-oecd-ilibrary-org.mu.idm.oclc.org/social-issues-migration-health/international-migration-outlook-2014_migr_outlook-2014-en. OECD (2015). *International Migration Outlook 2015*. (Report 10th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2015-en. OECD (2016). *International Migration Outlook 2016*. (Report 11st ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2016-en. OECD (2017). *International Migration Outlook 2017*. (Report 12nd ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2017-en. OECD (2018). *International Migration Outlook 2018*. (Report 13rd ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/migr_outlook-2018-en. OECD (2019). *International Migration Outlook 2019*. (Report 14th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/c3e35eec-en. OECD (2020). *International Migration Outlook 2020*. (Report 15th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/ec98f531-en. OECD (2021). *International Migration Outlook 2021*. (Report 16th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/29f23e9d-en. OECD (2022). *International Migration Outlook 2022*. (Report 17th ed.,). OECD Publishing. https://doi-org.mu.idm.oclc.org/10.1787/30fe16d2-en. OECD (2023). *International Migration Outlook 2023*. (Report 18th ed.,). OECD Publishing. https://doi.org/10.1787/b0f40584-en.
[19] Centraal Bureay voor de Statistiek (CBS) (n.d.). *How many people immigrate to the Netherlands?.* https://www.cbs.nl/en-gb/dossier/asylum-migration-and-integration/how-many-people-immigrate-to-the-netherlands-.

Focus on the Meuse-Rhine region

The Meuse-Rhine region is one of the principal micro-regions for cross-border activities, accounting for 8% of all cross-border work and travel within the European Union. This region is characterized by bidirectional commuting streams: from Germany to the Netherlands and from Belgium to the Netherlands[20].

Analysis of cross-border workers by education level reveals that 9% have a low level of education (ISCED 0-2), 33.5% have a medium level of education (ISCED 3-4), and 57.5% have a high level of education (ISCED 5-8)[21]. Furthermore, the industrial sector employs 38% of these workers, with 29% in manufacturing. The services sector employs 62% of these workers, including 11% in wholesale and retail trade, 9% in transportation and storage, 11% in human health and social work, and 13% in administrative and support services. The agricultural sector is not specifically mentioned, indicating it represents less than 5% of the workforce in this region[22].

The mayor of Kerkrade, Mrs. Petra Dassen, notes that predicting intra-EU migration due to the legalization of cannabis is challenging because it depends on numerous factors, including an individual's background. People who already use cannabis are more likely to consider the cannabis-related regulatory framework when exercising their right to freedom of movement. Conversely, Paul Magnette, president of the Parti Socialiste (PS) and mayor of Charleroi in Belgium, has pointed out that no studies have yet been conducted on this phenomenon[23].

According to the survey conducted, participants mostly mildly disagreed with the statement suggesting an increase in labor mobility. However, they remained neutral regarding the movement of individuals from one country to Germany to benefit from the cannabis-related legal framework. Moreover, respondents generally agreed that this would impact the establishment of businesses and affect competition.

Limited research has been identified on the specific prevalence of migration to the Netherlands, either in the Netherlands as a whole or in the specific Meuse-Rhine euro-region, solely due to cannabis-related labor mobility within the EU, nor on the workforce distribution by occupation within the cannabis market. Therefore, the following section concentrates on the economic growth and job creation observed in the U.S and in the EU in the cannabis sector to determine if the liberalization of recreational cannabis has the

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[20] Cross-border workers refer to a person of EU or EFTA nationality who is employed or self-employed in one EU or EFTA country, but ordinarily resides in another (neighbouring) EU and EFTA country. This concept therefore includes not only frontier workers, but also posted workers148 and seasonal workers. (European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Hassan, E., Siöland, L., Akbaba, B. (2023). *Annual report on intra-EU labour mobility 2022 (*Report). Publications Office of the European Union. https://data.europa.eu/doi/10.2767/560178).

[21] Hassan, E., Siöland, L., Akbaba, B. (2023). *Annual report on intra-EU labour mobility 2022 (*Report)*. Publications Office of the European Union. https://data.europa.eu/doi/10.2767/560178).

[22] Hassan, E., Siöland, L., Akbaba, B. (2023). *Annual report on intra-EU labour mobility 2022 (*Report)*. Publications Office of the European Union. https://data.europa.eu/doi/10.2767/560178).

[23] Hassan, E., Siöland, L., Akbaba, B. (2023). *Annual report on intra-EU labour mobility 2022 (*Report)*. Publications Office of the European Union. https://data.europa.eu/doi/10.2767/560178).

potential to stimulate intra-EU mobility, labor mobility, and economic growth through the migration and/or establishment of businesses and job creation.

4.1.3. Intra-labour mobility and economic development - focus on the cannabis-related industry

The recreational cannabis industry can represent a lucrative sector for both private entities and public authorities. Additionally, it serves as a catalyst for economic welfare and the creation of new job opportunities[24].

In 2018, the total worldwide legal cannabis market, encompassing cultivation, processing, and sales, was estimated to be between 126 and 290 billion EUR. Of this, 70% was attributed to the medical sector and 30% to the recreational sector, indicating a substantial and valuable product market[25]. According to data from Statista, worldwide revenue from the recreational cannabis market has seen significant growth, increasing from $11.49 billion USD in 2021 to an estimated $27.62 billion USD projected for 2024[26]. In the U.S., the legal cannabis sector supported 428,059 full-time job[27]. In the Netherlands, the revenue from the recreational cannabis market is projected to reach 118.30 million euros in 2024, with an expected annual growth rate of 1.54% through 2029[28].

The economic effects of cannabis legalization are both direct and indirect. Direct effects include the creation of jobs within the cannabis market, spanning the supply of cannabis and its production means. The supply market for cannabis is diverse, offering a variety of job types including cultivators, nurseries, extraction facilities, manufacturing and infusion processes, retail dispensaries, on-site consumption spaces, delivery and distribution services, and testing and sampling firms, as well as the production of

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[24] I. OBRADOVIC, Le cannabis, Paris, La découverte, 2022, p. 83 and s.

[25] I. OBRADOVIC, Le cannabis, Paris, La découverte, 2022, p. 83 and s.

[26] Definition of the market : The Cannabis market covers products derived from the cannabis plant used for medical or recreational purposes. These products may include dried flowers, oils, edibles, tinctures, and topicals. Depending on the regulations in each country or state, these products are provided by dispensaries, pharmacies, and/or online platforms. They may be consumed in the form of smoking, vaporizing, eating, or applying topically (Statista. (2024). *Recreational Cannabus – Worldwide*. [Dossier]. Retrieved December 5 may 2024, from https://es.statista.com/outlook/hmo/cannabis/recreational-cannabis/worldwide). Structure of the market : The market includes Medical, Pharmaceutical, and Recreational Cannabis as well as CBD Products. The Medical and Pharmaceutical Cannabis markets include products used to treat conditions such as chronic pain, mental disorders, and other medical conditions. The Recreational Cannabis and the the CBD Products markets include products used for personal enjoyment or leisure purposes. All cannabis markets include various forms of cannabis such as flowers, concentrates, edibles, and topicals. Statista. *Recreational Cannabis - United States*. (2024.). retrieved from 24 may 2024, from https://es.statista.com/outlook/hmo/cannabis/recreational-cannabis/united-states.

[27] Barcott. B. and Whitney. B. (23 February 2022). The US cannabis industry now supports 428,059 jobs. *Leafly*. https://www.leafly.com/news/industry/cannabis-jobs-report.

[28] *Recreational Cannabis - United States*. (2024.). Retrieved from 18 may 2024, from https://es.statista.com/outlook/hmo/cannabis/recreational-cannabis/netherlands.

derivative products related to cannabis consumption in all its forms. These roles require a range of skills, from low to high level of education[29].

This growth indirectly stimulates numerous economic sectors such as private security, advertising, design, research and development, tourism, digitalization, and biotechnology. Indirect effects encompass professions in the arts and legal fields, along with the creation of new job roles and university programs, such as 'cannabis sommelier'[30].

Despite these observations, research into the full economic consequences of cannabis legalization remains insufficiently explored in the Netherlands and in the EU. However, it appears that cannabis legalization tends to foster job creation and could potentially boost labor mobility, mainly for work-related reasons. This suggests that European workers, including those in the Meuse-Rhine Euroregion, are attracted primarily by broader employment and economic opportunities, with cannabis legislation playing a marginal role. The Meuse-Rhine region demonstrates notable cross-border mobility. It also matches the job demand in the cannabis sector, which requires a range of educational backgrounds, from low to high levels of education.

4.1.4. In the context if the German Cannabis Act

The original proposal by the German government to legalize commercial sales of recreational cannabis has been significantly diluted. According to a study by Professor Dr. Justus Haucap from the Düsseldorf Institute for Competition Economics (DICE) at Heinrich Heine University Düsseldorf (HHU), the full-scale liberalization of cannabis is a new lucrative sector that could have created many new jobs in the cannabis industry[31].

Will Muecke, co-founder of Artemis Growth Partners, supports this perspective in a podcast hosted by the "Cannabis Investing Network" channel. The discussion centers on how the European Commission dampened the original German government plan, limiting the economic impacts of the new law on the recreational use of cannabis in Germany[32]. Only residents with at least six months of permanent residency can purchase cannabis non-commercially if they are active members of a growers association, while non-

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[29] Department of Labour of New York. (n.d.). *Cannabis Career Exploration*. https://dol.ny.gov/cannabis-career-exploration ; Uzio. (n.d.). *Exploring Careers in Cannabis : A Comprehensive Guide to Majiruna Industry Jobs*. https://www.uzio.com/resources/exploring-careers-in-cannabis-a-comprehensive-guide-to-marijuana-industry-jobs/ ; Spapens, T. (2011). *The Cannabis Market in the Netherlands*. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1856467.

[30] I. OBRADOVIC, Le cannabis, Paris, La découverte, 2022, p. 83 and s.

[31] Lamers M. (updated : 6 April 2022). Germany to legalize recreational cannabis sales, incoming coalition pledges. *JLBizDaily*. https://mjbizdaily.com/germany-to-legalize-recreational-cannabis-sales-incoming-coalition-pledges/ ; Haucap, J., Knoke, L. Fiskalische Effekte der Cannabis-Legalisierung. Wirtschaftsdienst 101, 984–986 (2021). https://doi.org/10.1007/s10273-021-3076-1 ; Nuttall M. (1 April 2024). Germany sparks up: A brief analysis of it's new Cannabis romance. *Linkedin*. https://www.linkedin.com/pulse/germany-sparks-up-brief-analysis-its-new-cannabis-romance-nuttall-uaxmf/.

[32] Cannabis Investing Network (Host). (6 mar4 2024). Deepdive on German Cannabis (ft. Will Muecke, Co-founder of Artemis Growth Partners (No. 188) [Audio podcast episode]. *In Cannabis Investing Network*. https://open.spotify.com/episode/2WjY9ixOHDg9vEy29CXviA?si=NXKNr87ESKuX3B16W8ObVg.

members are restricted to buying propagation material. In these associations of cultivation, only members can collectively cultivate cannabis, and may only be assisted by marginally employed persons in the condition set by Section 8(1) of the Fourth Book of German Social Code.

The economic impact is expected to remain limited due to the German government's cautious approach. This strategy involves regional commercial pilot projects instead of full commercialization, aimed at collecting data for informed future policy decisions. These pilot projects will serve as scientific experiments, potentially paving the way for comprehensive cannabis legalization in the future or for full-scale legislation if the EU legal framework allows it, which is currently not the case[33].

As a result, only a limited economic impact on the adult-use market is anticipated. The sector is unlikely to replicate the job creation levels seen in the U.S., impacting sectors such as cannabis supply, investments, advertising, design, and tourism. However, opportunities for ancillary businesses remain, including leasing property and facilities for clubs or providing specialized services. These opportunities could stimulate intra-EU mobility for work-related reasons, including in the Rhine-Meuse euro-region, as well as encourage the establishment or relocation of businesses.

Health and protection of public health, quality of cannabis

The health and protection strategies of public health, such as prevention strategies for youth or educational purposes to form a literacy on licit and illicit drug use, vary across countries. This report focuses on current prevention strategies of countries that have more liberal cannabis sales states and policies, namely Canada, the United States, and the Netherlands, and focuses on their successful commonalities, which can exhibit an example for the current strategies in the German legislation.

Cannabis Public Health Campaigns in Canada, the United States, and the Netherlands

Countries that adopted a more flexible approach to cannabis have come up with different health-related policies. Some of the most relevant are: Don't Drive High Campaign[34] (Canada), Your Cannabis Questions, Answered Campaign[35] (Canada), California's Let's Talk Cannabis Campaign (USA), Colorado's Good to Know Campaign[36] (USA), cannabis regulation through the "gedoogbeleid" policy [37] (Netherlands), and public health campaigns in the Netherlands.

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[33] Lamers M. (updated : 4 August 2023). Germany unveils scaled-down recreational cannabis legalization plan. *JLBizDaily* https://mjbizdaily.com/germany-unveils-scaled-down-recreational-cannabis-legalization-plan/.

[34] Service Canada. (2024, March 1). Don't drive high. Canada.ca. https://www.canada.ca/en/campaign/don-t-drive-high.html

[35] Steiner, L., Nicol, A., & Eykelbosh, A. (2019). How we talk about "Pot" matters: strategies for improved cannabis risk communication. Environmental Health Review, 62(1), 8–13. https://doi.org/10.5864/d2019-005

[36] A public health approach to regulating commercially legalized cannabis. (2021, January 13). https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2021/01/13/a-public-health-approach-to-regulating-commercially-legalized-cannabis

[37] The Dutch policy on marijuana use - continuity and change. (n.d.). Centre for Public Impact (CPI). https://www.centreforpublicimpact.org/case-study/dutch-policy-marijuana-use-continuity-change/

The common elements of cannabis public health campaigns in Canada, the United States, and the Netherlands address the education and awareness, targeted messaging, harm reduction strategies, and community collaboration, which determine their success. These components ensure that the public is well-informed about the risks and safe use of cannabis, ultimately promoting public health and safety in regions where cannabis is legalised.

The importance of education and awareness to prevent misuse and the potential health risks associated with cannabis use have also been supported during an interview with a Dutch psychopharmacologist. They emphasised the relevance of incorporating discussions about cannabis within educational settings and addressed how crucial it is for schools and community programs to provide comprehensive psychoeducation on the substance. Educators should address the misconception that legalisation equates to safety and emphasise the importance of informed decision-making.

Another factor of these campaigns often involves partnerships with community organisations to extend their reach and impact, enhancing the credibility and reach of public health campaigns, enabling the dissemination of messages through trusted local channels and increasing the likelihood of community engagement and behaviour change. According to the psychopharmacologist, implementing support systems modelled after successful programs, such as the Mondrian approach in the Netherlands, can be highly beneficial. These programs offer non-judgmental conversations and support, enabling individuals to seek advice and information in a safe and supportive environment. A fundamental aspect of preventing cannabis-related harm is to maintain clear communication about the risks associated with its use. Despite its legal status, cannabis poses significant health risks. Public education campaigns should focus on dispelling myths about cannabis being harmless and emphasise the potential dangers, including addiction, impaired cognitive function, and increased risk of psychosis. Establishing institutes focused on cannabis literacy and support can provide valuable resources and guidance to users. They said this should also entail an umbrella approach by using strategies that use tailored interventions for at-risk individuals. Interventions in Portugal could serve as a role model where individuals with noticeable high cannabis consumption, or the consumption of other drugs, are closely monitored and offered appropriate support. The assessment for at-risk individuals includes the monitoring of conditions such as ADHD or psychosis, which have been closely correlated with cannabis consumption. However, it is important to mention that this correlation heavily depends on the gene constellation of every individual and their genetic predisposition, as well as the environmental factors of the individual.

Lastly, tailored interventions for risk groups such as parents with drug use problems, frequent users of cannabis, tourists, young people with learning disabilities, young people from socio-economically deprived neighbourhoods, or in special institutional settings have a higher risk for the use of cannabis and its maladaptive risk-factors which include the lack of motivation for work, or the inability to execute tasks in everyday life. To minimise the risk of severe consequences, adopting a harm reduction approach is essential in mitigating the risks of cannabis use. This involves educating individuals about safer use practices, such as understanding dosage and choosing less harmful consumption methods.

Our survey also examined the question to which respondents agree that the legalisation of cannabis in Germany will positively influence public health in neighbouring countries like the Netherlands and Belgium

(mean score: 3.44). This score suggests a moderate level of agreement among participants, and the responses indicate that many believe cannabis legalisation in Germany could foster better prevention, education about cannabis, prevention strategies, and educational campaigns in neighbouring countries. The mean score, which leans towards agreement, reflects an optimistic view that Germany's policy changes could serve as a catalyst for improved public health measures concerning cannabis use in nearby regions.

Based on the cannabis public health campaigns in Canada, the United States, and the Netherlands, Germany can implement several key strategies to ensure the effectiveness of its cannabis legalisation efforts. Prioritising education and awareness is crucial, incorporating discussions about cannabis within educational settings to dispel myths and encourage informed decision-making. Moreover, partnerships with community organisations can enhance the reach and credibility of public health messages, fostering community engagement and behaviour change. Lastly, by establishing support systems and institutes focused on cannabis literacy, valuable resources and guidance can be provided, and tailored interventions for at-risk groups, along with harm reduction approaches, can mitigate the risks associated with cannabis use. By adopting these comprehensive strategies, Germany can promote public health and safety while navigating the challenges of cannabis legalisation.

Quality assessment of cannabis

Quality assessments for cannabis regulations vary significantly across countries that permit the purchase of cannabis for non-medicinal use. These differences can pose potential risks for consumers, primarily because unclear regulations may overlook hazardous contents such as pesticides, fungi, and heavy metals in cannabis from unknown supply chains.

Canada has implemented rigorous Quality Control/Quality Assurance (QC/QA) standards through Health Canada, the federal regulator overseeing cannabis production, manufacturing, and QC/QA [38]. Licensed producers (LPs) must follow validated protocols to ensure product consistency and safety, including mandatory testing for cannabinoids, microbial contaminants, pesticide residues, elemental impurities, and residual solvents.

These measures act as a consumer protection mechanism, reducing information asymmetry in the market.[39]

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[38] Pusiak, R. J., Cox, C., & Harris, C. S. (2021). Growing pains: An overview of cannabis quality control and quality assurance in Canada. the International Journal of Drug Policy/International Journal on Drug Policy, 93, 103111. https://doi.org/10.1016/j.drugpo.2021.103111

[39] Health Canada. (2023, October 23). Guidance document: Good production practices guide for cannabis. Canada.ca. https://www.canada.ca/en/health-canada/services/cannabis-regulations-licensed-producers/good-production-practices-guide/guidance-document.html

The Netherlands employs a toleration policy for cannabis and coffee shops, characterised by the 'tolerated front door' and 'illegal back door' approach.[40] This allows the sale of cannabis in coffee shops while treating its supply and production as illegal. This policy has led to substantial problems concerning public order and safety, including the permitted supply of illegally grown cannabis, illegal cultivation, related crime, and hazardous situations in neighbourhoods. Additionally, the lack of independent product quality control and comprehensive health information poses further health risks to consumers.

The quality control of cannabis sold in Dutch coffee shops has been limited, largely depending on informal checks by coffee shop owners. The regulatory framework's leniency has resulted in challenges related to the purity and safety of cannabis products. Research findings support this evidence and reported higher fungi and pesticide contamination above the European Pharmacopoeia (EP) limits [41] [42].

The presence of fungi in recreational cannabis is an underestimated source of neurological toxicity and infections such as aspergillosis [43]. This risk is particularly high for immunocompromised individuals, including those with diseases like AIDS.

The data indicate that medicinal cannabis from uncontrolled sources poses a significant health risk, especially for daily consumers. This has also been confirmed by interviews with a psychopharmacologist who emphasised the importance of impurity assessment as a critical component of quality control. Legalisation allows for systematic testing for impurities that can affect the safety and efficacy of cannabis. This includes testing for residual solvents and other chemical impurities that can arise during cultivation and processing.

Controlled Cannabis Supply Chain Experiment

A significant milestone towards better regulation and reduced health risks in the Netherlands is the Controlled Cannabis Supply Chain Experiment. This initiative aims to determine whether regulating the production, distribution, and sale of quality-controlled cannabis is feasible and its effects on crime, safety, and public health. The experiment started on December 15, 2023, in Breda and Tilburg, focusing on establishing a closed cannabis chain in ten medium-sized or large municipalities [44].

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[40] Ministerie van Justitie en Veiligheid. (2022, February 2). Toleration policy regarding soft drugs and coffee shops. Drugs | Government.nl. https://www.government.nl/topics/drugs/toleration-policy-regarding-soft-drugs-and-coffee-shops

[41] McLaren, J., Swift, W., Dillon, P., & Allsop, S. (2008). Cannabis potency and contamination: a review of the literature. Addiction, 103(7), 1100–1109. https://doi.org/10.1111/j.1360-0443.2008.02230.x

[42] Venhuis, B. J., Van De Nobelen, S., & RIVM. (2015). Cannabis contaminanten. In RIVM Briefrapport 2015-0205 (pp. 2–23). Rijksinstituut voor Volksgezondheid en Milieu. https://www.rivm.nl/bibliotheek/rapporten/2015-0205.pdf

[43] Gwinn, K. D., Leung, M. C. K., Stephens, A. B., & Punja, Z. K. (2023). Fungal and mycotoxin contaminants in cannabis and hemp flowers: implications for consumer health and directions for further research. Frontiers in Microbiology, 14. https://doi.org/10.3389/fmicb.2023.1278189

[44] Knottnerus, J. A., Blom, T., Van Eerden, S., Mans, J. H., Van De Mheen, D., De Neeling, J. D., Schelfhout, D. C., Seidell, J. C., Van Wijk, A. H., Van Wingerde, C., & Van Den Brink, W. (2023). Cannabis policy in The Netherlands: Rationale and design of an experiment with a controlled legal ('closed') cannabis supply chain. Health Policy, 129, 104699. https://doi.org/10.1016/j.healthpol.2022.12.007

The implementation of the Controlled Cannabis Supply Chain Experiment in the Netherlands serves as a crucial step towards harmonising regulations with Germany. By establishing a closed system for the production, distribution, and sale of quality-controlled cannabis, this experiment aims to address the current regulatory gaps and health risks associated with unregulated cannabis. As Germany rolls out its comprehensive cannabis legislation, insights and outcomes from the Dutch experiment can inform and potentially align regulatory approaches, reducing discrepancies between the two countries. This harmonisation can help ensure consistent safety and quality standards across borders, benefiting consumers and reinforcing public health objectives.

Germany: New Cannabis Legislation

Germany's new cannabis legislation introduces comprehensive measures for cannabis quality assessment, focusing on consumer safety and public health. The Federal Ministry of Food and Agriculture, in agreement with the Federal Ministry of Health, is authorised to determine the maximum levels of harmful substances in cannabis, including pesticides, fertilisers, biocidal products, mycotoxins, heavy metals, and microorganisms [45]. The legislation also covers substances in packaging materials intended to contact cannabis, ensuring minimal contamination from these sources. The regulatory standard and limits are based on the European pharmacopoeia's current quality assessments, which is also the official guideline for medicinal cannabis production.

Based on these regulations, the law mandates regular sampling and adherence to Good Manufacturing Practices (GMP), ensuring cannabis is grown, processed, and sold under regulated conditions, significantly reducing impurities, contaminants, and inconsistencies to protect public health [46]. This concept is supported by psychopharmacologists, who emphasise that quality assessment under GMP involves rigorous testing at various production stages to assess cannabis purity and detect harmful substances like pesticides and heavy metals, thereby ensuring consumers of the safety and consistency of cannabis products. Regulation of cannabis cultivation and sale sets standards for agricultural practices and mandates strict guidelines for storage, handling, and distribution to maintain product integrity [47]. Legal regulation also influences the cannabinoid profile, ensuring appropriate levels of THC and CBD, which are crucial for enhancing medicinal benefits while minimising adverse effects. Additionally, legalisation supports research into lesser-known cannabinoids like CBN, potentially leading to new therapeutic applications. Regulating the potency of cannabis products, by setting THC limits and controlling purchase

[45] BRANCHENVERBAND CANNABISWIRTSCHAFT E.V. (2023b). Qualitätsanforderungen an Cannabis zu Genusszwecken [Positionspapier]. ELEMENTE, 28, 1–3. https://cannabiswirtschaft.de/wp-content/uploads/2023/02/ELEMENTE-28-Qualitaetsanforderungen-Genusscannabis-_V1.0.pdf

[46] Bundesregierung. (n.d.). Gesetzentwurf der Bundesregierung: Entwurf eines Gesetzes zum kontrollierten Umgang mit Cannabis und zur Änderung weiterer Vorschriften (Cannabisgesetz – CanG). https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/C/Cannabis/Gesetzentwurf_Cannabis_Kabinett.pdf

[47] BRANCHENVERBAND CANNABISWIRTSCHAFT E.V. (2023). Qualitätsanforderungen an Cannabis zu Genusszwecken [Positionspapier]. ELEMENTE, 28, 1–3. https://cannabiswirtschaft.de/wp-content/uploads/2023/02/ELEMENTE-28-Qualitaetsanforderungen-Genusscannabis-_V1.0.pdf

quantities, addresses concerns about overconsumption and prevents overly potent products from reaching the market, particularly in the context of medicinal use.

However, Germany must strike a careful balance in its quality assessment and regulatory framework for cannabis to ensure that it is attractive for consumers while not being prohibitively costly. If the regulations are too stringent or the associated costs too high, there is a risk that consumers may turn to the black market or cross the border to the Netherlands, where regulations are currently less strict. This could undermine the goals of public health and safety that the new legislation aims to achieve, making it essential to find a middle ground that maintains high standards without driving consumers away from the legal market.

5. Evaluation of the theme of sustainable/ socio-economic development

Tourism

A familiar sight for residents near the Dutch-German border in Limburg is observing Germans travelling by train or car to the nearest coffeeshop. This section discusses whether the new legislation in Germany might change such landscapes or whether drug tourism patterns stay the same. Drug tourism is defined in this report as travel for the purpose of legally acquiring or consuming psychotropic substances or travel whose main purpose is the consumption of drugs.[48]

A lawyer and cannabis expert estimates that Germany's cannabis legalisation can have two potential effects: (i) it may reduce cannabis consumption by Germans in the Netherlands, but (ii) it could also increase it as Germans might transport cannabis across borders with less risk.[49] Clients note that this largely depends on pricing.[50] Regarding changes in drug and coffeeshop tourism in the Netherlands due to German legalisation, it's important to note that Maastricht enforces the *i*-criterion. This criterion, introduced after a significant drug tourism problem in the 2010s, restricts cannabis sales to residents only.[51] Professor Hans Nelen notes that while the *i*-criterion aimed to limit drug tourism, it simply displaced the problem to the streets, as the illegal market adapts quickly to new situations—action leads to reaction. A civil servant from Maastricht expects that Maastricht's black market might notice an effect from the legalisation in Germany (i.e. less demand), which the municipality considers to be a positive development. Other Dutch cities in the EMR, such as Kerkrade, do not have this 'resident policy'. Kerkrade's mayor explains that the *i*-criterion is intentionally not implemented there to avoid increased crime, such as illegal trade, due to limited police capacity. She feels that drug tourism will remain stable for now, as Germany's conditions are somewhat restrictive. For border residents, visiting a coffee shop is arguably easier than entering a cannabis club, but people living further from the border might find it easier to join a club and obtain cannabis in Germany. However, no research in Kerkrade has identified the exact origins of coffee shop tourists.

Some expect that coffeeshops will note a difference with Germans coming less often to the Netherlands for drug tourism - influencing economic activity in the sector.[52] A German social scientist, with an expertise

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[48] Hoffman, B. (2014). Drug consumption tourism as a social phenomenon. *Trakia Journal of Sciences*, *12*(4), 455–460. https://doi.org/10.15547/tjs.2014.04.017, p. 456

[49] Banach, B. & Langenveld, R. (2024, 1 april). Legaal blowen kan vanaf nu in Duitsland: Walter uit Heinsberg gaat meteen plantjes kweken op zijn dakterras. *De Limburger.* https://www.limburger.nl/cnt/dmf20240329_94314965

[50] Bouten, J. (2023, 27 april). Tip van Duitse drugsgebruikers voor Limburgse koffieshops: ga hennepzaadjes verkopen, dat doen ze in Amsterdam ook. *De Limburger.* https://www.limburger.nl/cnt/dmf20230426_96227997

[51] Korf, D. J. (2019). Cannabis Regulation in Europe: Country Report Netherlands. *Transnational Institute, Amsterdam*. https://pure.uva.nl/ws/files/43793050/35534083.pdf

[52] NOS. (2024). *Cannabis legaal in Duitsland: 'Coffeeshops gaan dit merken'.* https://nos.nl/regio/limburg/artikel/505134-cannabis-legaal-in-duitsland-coffeeshops-gaan-dit-merken

in drug-related themes, mentioned that it is too early to determine the effect on tourism, although he does note that the cannabis clubs are not easy to enter while access in The Netherlands is generally straightforward. However, a medical cannabis company salesman argues that cannabis clubs will play a minor role for German consumers. He argues that, since the legalisation, Germans acquire cannabis differently. He has seen a significant increase in medical cannabis prescriptions following the legalization – which made it easier for doctors to prescribe cannabis. This option is popular according to him due to the fact that it is legal, tested, and relatively cheap.

One of the key adverse consequences regarding drug tourism is nuisance.[53] Therefore, a potential positive impact of reduced drug tourism due to Germany's legalisation could be a decrease in public nuisance. Kerkrade's mayor acknowledges that residents might experience some unrest due to drug tourism at the moment, but it can be controlled as it is now, with the main issue being busy traffic rather than daily disturbances.

Concerning a change of drug tourism to Germany, it is crucial to note that the law is strict about not allowing foreigners - one has to have lived in Germany for longer than six months - to consume cannabis in cannabis clubs, raising doubts about an increase in drug tourism with Germany as the destination. Nonetheless, legalisation might impact the informal market, which could, in turn, affect drug tourism. Outside of the scope of the black market, the German social scientist does not expect any significant impact on tourism towards Germany due to the requirement that one must be a resident for over six months to join a cannabis club. It is difficult to base expectations on studies from other contexts, due to the unique character of the implemented law. Survey results indicated that, overall, the grand majority of people residing in the German border region area do not expect to travel to Germany more often nor do they expect that their usage of cannabis will increase.

A crucial question arises about Belgium, where cannabis is not legalised but borders two regions where it is—yet both have strict residency requirements: the Dutch *i*-criterion in Maastricht and the cannabis clubs in Germany. Will Belgian cannabis consumers adapt their drug tourism? In response to inquiries directed at an addiction treatment and prevention organisation in Liège, they indicated that they had not yet received any feedback from their patients regarding the recent legalisation changes. In this regard, it is also important to note that in Belgium, cannabis is typically acquired through the black market. Similar to the German case, the large majority of individuals living in the Belgian border area do not think they will travel to Germany more regularly nor that their usage of weed will increase due to the legalisation.

Criminal proneness

Criminal proneness is a very heated topic when it comes to drugs. For the purpose of the report, it is necessary to distinguish between (1) cannabis-related crime; and (2) organised crime and illegal trafficking.

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[53] Van Ooyen-Houben, M., & Kleemans, E. (2015). Drug policy: the "Dutch model". *Crime and Justice*, *44*(1), 165-226.

As for the first one, it has been established in some studies that cannabis is not, per se, inducing violent criminal behaviour in consumers.[54] As a matter of fact, Jacques et al. (2016) have noticed during their research that cafés (selling alcohol) were more likely to be victimised than coffee shops and they advanced the hypothesis that this depends on the psychogenic properties of cannabis and alcohol[55]; it has been established that marijuana does not cause violent behaviour, but this is not the same for alcohol intoxication.[56]

Some studies conducted in Canada tried to investigate the relationship between cannabis-related crime pre- and post-legalisation, observing a decrease if such offences in both adults[57] and youths[58] after the implementation of the Cannabis Act in 2018.

To further illustrate this, the legalisation of cannabis in multiple US states close to the Mexican border has been assumed to cause less crime, violence, and illegal trade in cannabis. For example, from 2.5 million pounds in 2011, the U.S. Border Patrol has seen a steady decrease in drug seizures, reaching 1.9 million pounds by 2014. Similarly, Mexico's army noted a sharper decline, confiscating 664 tons of cannabis in 2014, which was 32% lower than the preceding year.[59] A significantly fewer number of homicides surrounding cannabis crime were also reported. Conversely, as there are moderate suggestions in literature that cannabis can also lead to an increase in aggression[60], legalization can also lead to an increase in violence and thus less safety and a more hostile environment in the bordering neighbourhoods. However, the situation in the Euregio Maas-Rhein (EMR) is at least in part different, since criminality, in this case, must be considered from a transnational point of view.

In discussing the topic with Professor Hans Nelen, a distinction was drawn between crimes related to the demand and crimes related to the supply of cannabis.

As for the former, it is reasonable to assert that there will be a decrease of illegal purchase of cannabis because, simply, the law decriminalises the purchase of marijuana. However, there will still be a group of people that will, most likely, recur to illegal means to buy marijuana: underaged youths. Young people,

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[54] Jacques, S., Rosenfeld, R., Wright, R., & Gemert, F. (2016). Effects of Prohibition and Decriminalization on Drug Market Conflict : Comparing Street Dealers, Coffeeshops, and Cafés in Amsterdam. *Criminology & Public Policy*, *15*(3), 843–875. https://doi.org/10.1111/1745-9133.12218

[55] Ibid.

[56] Felson, R. B., & Staff, J. (2010). The Effects of Alcohol Intoxication on Violent Versus Other Offending. *Criminal Justice and Behavior*, *37*(12), 1343-1360. https://doi.org/10.1177/0093854810382003

[57] Callaghan, R. C., Sanches, M., Hathaway, A., Asbridge, M., & Kish, S. J. (2023). Canada's cannabis legalization and adult crime patterns, 2015–2021: A time series study. *Addictive Behaviors, 146,* 1–5. https://doi.org/10.1016/j.addbeh.2023.107813

[58] Callaghan RC, Vander Heiden J, Sanches M, Asbridge M, Hathaway A, Kish SJ. (2021). Impacts of Canada's cannabis legalization on police-reported crime among youth: early evidence. *Addiction. 116*(12), 3454-3462. doi: 10.1111/add.15535

[59] https://glewkimlaw.com/how-u-s-marijuana-legalization-affected-mexican-drug-cartels/

[60] Dugré, J. R., Giguère, C., & Potvin, S. (2024). The company you keep: The neglected role of affiliating with delinquent friends in the development of the cannabis-violence link. *Addictive Behaviors*, *151*, 107939. https://doi.org/10.1016/j.addbeh.2023.107939

especially during adolescence, tend to commit more crime in general and for them buying marijuana will not be possible through legal means, thus they will most likely turn to the illegal market.

On the other hand, when it comes to supply, the main actors involved are organised criminals that work in the illegal market. The illegal market will, in all probability, adapt to the circumstances. It is hard to draw more specific inferences, but the interviewee is of the opinion that enforcing the measures listed in the law will be challenging, and this could pave the way for illegal practices. For example, he recalls that when the i-criterion (or "resident" criterion) was introduced in Maastricht, an important displacement was noticed: illegal sellers moved to the streets, where non-Dutch citizens coming from the border regions could still buy marijuana, to then bring it back over the border.

Addiction exposure

The potential dangers of cannabis addiction among adolescents and young adults have become a significant public health concern. Adolescents who begin using cannabis early are at heightened risk of experiencing several negative outcomes. Research indicates that these individuals often perform worse academically compared to their peers who abstain from cannabis use. This discrepancy may be attributed to a combination of factors, including pre-existing vulnerabilities, the acute effects of intoxication on cognitive functions, peer influences, and the premature transition into adult roles. For young adults, regular cannabis use is linked to various health issues, such as motor vehicle accidents, the development of cannabis dependence, impaired respiratory function, cardiovascular diseases, and psychotic symptoms[61].

Moreover, regular cannabis use can adversely impact psychological development, leading to conditions such as depression and poorer mental health overall. These psychological effects underscore the profound impact that cannabis can have on the well-being of young individuals, highlighting the need for targeted interventions and preventive measures [62].

The legalisation of cannabis, particularly for recreational use, has led to a noticeable increase in its prevalence in households, including those with children. A study in Colorado, a state where recreational cannabis is legal, found that the number of households reporting cannabis presence increased from 6.9% in 2014 to 11.2% in 2017. While many caregivers reported storing cannabis in locations inaccessible to children, only 67% used locked containers. This situation poses risks of unintentional exposure and potential diversion to adolescents[63].

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[61] Hall, W. (2009). The adverse health effects of cannabis use: What are they, and what are their implications for policy? the International Journal of Drug Policy/International Journal on Drug Policy, 20(6), 458–466. https://doi.org/10.1016/j.drugpo.2009.02.013

[62] Brooks-Russell, A., Hall, K., Peterson, A., Graves, J., & Van Dyke, M. (2019). Cannabis in homes with children: use and storage practices in a legalised state. Injury Prevention, 26(1), 89–92. https://doi.org/10.1136/injuryprev-2019-043318

[63] Ibid.

Furthermore, the effects of legalisation on parental cannabis use during pregnancy and postpartum are significant. Legalisation appears to increase maternal cannabis use during these critical periods, which could have implications for child development. The broader approval of adult cannabis use post-legalization suggests a cultural shift that normalises cannabis consumption, potentially influencing parenting behaviours and attitudes [64].

Analysing the impact of cannabis legalisation on adolescent use requires careful consideration of data limitations and discrepancies. The Monitoring the Future (MTF) survey provides valuable national-level insights but lacks state-specific data, which can lead to challenges in assessing the causal effects of legalisation. Discrepancies between MTF data and state-representative surveys highlight the need for cross-validation to ensure credible and accurate assessments [65].

However, these different analyses must be approached with caution since the legalisation of cannabis has also led to greater transparency in the utilisation and use of the substance. It remains unclear whether the storage and use of cannabis have increased post-legalization or are simply being reported more openly.

In comparison, a survey conducted for this report addressed the potential increase in cannabis use. The mean score of 1.87 indicates that citizens in cross-border regions do not expect their cannabis consumption to increase significantly post-legalization. However, the survey also highlighted a strong inclination towards the need for more addiction prevention strategies post-legalization, with a mean score of 3.79 indicating significant concern in this area.

German legalisation has the potential to mitigate these risk factors through various campaigns and regulations that restrict cannabis use to specific instances. For example, cannabis use may be permitted only in designated areas, with specific restrictions to prevent smoking near schools, kindergartens, sports facilities, and public playgrounds. Additionally, public consumption is banned in pedestrian zones between 7am and 8pm These measures aim to ensure that cannabis use does not adversely affect minors and other vulnerable populations.

Consumer protection and safety

For legal cannabis to be sold under protection of law it is self-explanatory that the well-being of consumers is imperative for beneficial effects to society to gain hold. The cannabis distributed through clubs will, as any other product sold under a governmental body, have to comply with Consumer Protection Laws and Standards in which safety of usage and protection from hazardous substances is paramount..

One of the most important aspects of consumer safety is the strength of the distributed cannabis. Δ9-Tetrahydrocannabinol (THC) is the cause of the rewarding and intoxicating feelings that cannabis

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[64] Wilson, S., & Rhee, S. H. (2022). Causal effects of cannabis legalization on parents, parenting, and children: A systematic review. Preventive Medicine, 156, 106956. https://doi.org/10.1016/j.ypmed.2022.106956

[65] Midgette, G., & Reuter, P. (2019). Has cannabis use among youth increased after changes in its legal status? A Commentary on Use of Monitoring the Future for analyses of changes in state cannabis laws. Prevention Science, 21(1), 137–145. https://doi.org/10.1007/s11121-019-01068-4

produces, it is also the primary compound within the plant and its potency can differ because of many different factors[66]. Martin-Willett et al. (2023) argue that more research is required on the differences in effect based on potency variance on both short- and long term, although there is evidence that the usage of high potency THC cannabis increases the likeliness of self-reported anxiety and depression[67]. The effect of legalisation in this topic can also not be overlooked. Even though close to no data on prices or potencies of both legal and illegal cannabis can be validly presented and post-legalization data is also very limited, illegal cannabis seemed to be less expensive and more THC potent than legal cannabis in the 2 months that followed the legalisation in Canada in 2018[68].

For cannabis in general, the findings of the survey show that the public believes that a legalisation will surely improve consumer protection and safety, averaging between agree and strongly agree with only a small deviation in opinion. Mayor Dassen supplements this finding by stating that in the Netherlands the experiments are, besides focusing on reducing crime, also meant to find out what levels of THC are considered to be healthy and not be a threat to public health. Possibilities for research in this topic increase as it is now known and documented what has been sown and reaped. Furthermore, Mayor Dassen can imagine that the German legalisation is also intended to touch upon this so it might improve. Unfortunately, no data was found of the relation between THC potency and self-reported anxiety and depression in the Meuse-Rhine Euroregion, which also counts for the price and potency of illegal cannabis after the legalisation as this can only be researched ex-post.

Economic development of border entrepreneurs

In Limburg, there are close to 30 coffee shops, all of which are within arms reach of the German and Belgian border. It can be assumed that consumers from across the border consume more than only cannabis in coffee shops in the Netherlands, for example, food, drinks, necessities to consume cannabis, etc. In line with this, the potentially positive economic development in other services and stores in the Netherlands can also be negatively affected by a legalisation of cannabis in Germany. However, this would in turn also create opportunities for German entrepreneurship to supply the demand for the products previously bought in the Netherlands. Unfortunately, no academic studies into adjacent consumption alongside cannabis consumption were found. Although, Hoffmann (2014) mentions the adapting of tourist facilities to meet the needs of drug tourists when sufficient demand is available[69]. A future assessment on this topic could aim to identify the products most frequently bought or consumed with cannabis and afterwards

[66] Martin-Willett, R., Skrzynski, C. J., Karoly, H. C., Elmore, J. S., & Bidwell, L. C. (2023). Baseline affective symptomatology moderates acute subjective effects of high potency THC and CBD cannabis concentrates. *Experimental and Clinical Psychopharmacology*, *31*(6), 1039–1049. https://doi.org/10.1037/pha0000667

[67] Rup, J., Freeman, T. P., Perlman, C., & Hammond, D. (2021). Cannabis and mental health: Prevalence of use and modes of cannabis administration by mental health status. Addictive Behaviors, 121, Article 106991. https://doi.org/10.1016/j.addbeh.2021.106991

[68] Mahamad, S., Wadsworth, E., Rynard, V., Goodman, S., & Hammond, D. (2020). Availability, retail price and potency of legal and illegal cannabis in Canada after recreational cannabis legalisation. *Drug and Alcohol Review*, *39*(4), 337–346. https://doi.org/10.1111/dar.13069

[69] Hoffman, B. (2014). Drug consumption tourism as a social phenomenon. *Trakia Journal of Sciences*, *12*(4), 455–460. https://doi.org/10.15547/tjs.2014.04.017

project the potential economic impact on adjacent businesses of cannabis consumption in a close area to a coffee shop or cannabis club.

Nonetheless, the public were inquired to assess this possible shift, rise or demise in entrepreneurship around the borders and the aggregate results show only a mild agreement with the statement that economic development will experience an uplift due to the legalisation. This shows the hesitancy of the public to make assumptions on this. In line with the lack of evidence on this, it can be difficult to assess the adjacent economic impact that the cannabis-business takes with it and thus project potential decreases or increases.

Moreover, several professionals were asked to share their perspective on this topic and their opinions varied. An experienced German director and social scientist in addiction research with 20 years of tenure in governmental institutions mentioned the possibility of economic opportunities due to this rise of business. Additionally, a salesman from a Germany-based medical cannabis company anticipates growth in this sector. Medical cannabis has become an attractive business since legalisation, with an increasing number of prescriptions from doctors and significantly rising business revenues.

However, as Mayor Dassen mentions, there is no research or other evidence to confirm or deny the effects and potential opportunities of the legalisation in Germany on local economic development. Mayor Dassen, however, expects the local economic impact to be minimal as she is personally under the assumption that the 'drug tourists' mainly only consume cannabis in the Dutch border coffee shops, only to leave directly afterwards. As a resident of the municipality of Kerkrade, one of the researchers in this study supports this statement by stating that most tourists use the coffee shop as a drive-through, doing a quick transaction and afterwards departing back to the border.

5. Evaluation of the theme of Euroregional cohesion

Cross-border policy cooperation

The legalisation of cannabis in Germany presents a complex challenge and an opportunity for cross-border policy cooperation. As the countries of the EMR-Euregio navigate the implications of this legislative shift, collaborative efforts in law enforcement[70], public health, and regulatory alignment become increasingly crucial. By examining their cooperation, we can better understand the potential for harmonised policies and the enhancement of cross-border relations.

To explore how cross-border policy cooperation currently functions and may change in the future, it is first necessary to understand what factors are crucial for effective cross-border policy cooperation. Leuprecht et al.[71] note that enhancing cross-border policy cooperation hinges not only on cultural affinities but also on trust-based elements beyond cultural similarities. Pluralistic modes of communication and interactions, for instance, foster a conducive environment for cultivating friendly and trusting relationships, thereby facilitating effective collaboration across borders. Such communication and collaboration is a need identified by the interviewed German social scientist, who underscores the need for the exchange of information. He states that he "would appreciate governmental bodies exchange information of how things are running, how the cannabis part-legalisation is going in practice, experiences, plans and concepts." The Mayor of Kerkrade further notes that the Netherlands serves as a benchmark for other countries to assess but that she is not aware of any cooperation or deliberation between the EMR countries.

Despite this arguable lack of cooperation and deliberation, there is arguably potential for improvement. A civil servant working for a governmental organisation focused on cross-border cooperation in the Euregio Maas-Rhein notes that cross-border policy cooperation is working rather successfully, thanks to the shared interest present in the region. There is a local approach, and the region is seen as one entity, not as separate elements (i.e., countries), which is influenced, among other things, by the shared history of the region. Nonetheless, he also notes that a challenge his organisation faces in current EMR-Euregio cooperation is primarily regarding differences in administrative cultures, laws, and regulations.

The primary issue regarding the latter is the difference in regulations and laws between countries. This notion is reinforced by Knotterus et al., who contend that achieving suitable international alignment is imperative. They suggest that international comparative learning can assist countries in the enhancement of their cannabis policies. Maintaining close engagement with other governments is pivotal in this regard, as it can foster improved international cooperation geared towards revising international treaties and

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[70] This part does not cover the substantial cooperation in law enforcement, which is further discussed in the section on cross-border trafficking and law enforcement.

[71] Leuprecht, C., Brunet-Jailly, E., Hataley, T., & Legrand, T. (2021). Patterns in nascent, ascendant and mature border security: regional comparisons in transgovernmental coordination, cooperation, and collaboration. *Commonwealth & Comparative Politics*, *59*(4), 349-375. https://www.tandfonline.com/doi/full/10.1080/14662043.2021.1997192

agreements. [72] A salesman for medical cannabis notes that such international agreements caused the initial German law not to pass since Germany wanted a fully legalised chain—unlike the Netherlands, where the supply to coffeeshops is tolerated but not legal—despite some current experiments in the Netherlands. The German social scientist underlines this by stating that the German government proposed such a fully legalised chain in Brussels but received a negative response, as it would be against European law.

The municipality of Maastricht notes that law enforcement and responsibilities in this field differ significantly by country, with many different government layers in Germany, making it difficult to have the appropriate contact person - "Roles and responsibilities are unclear and not at the same level". However, he notes, knowledge exchange in the field of law enforcement has significantly improved over the past years. Moreover, he expects that if new problems will come up, that they will be discussed, and that municipalities will ask each other how they deal with problem X, but there are currently no plans for concrete joint actions and projects. The strengthening of cooperation will thus depend on whether new issues will arise. Maastricht municipality notes that in terms of security, cooperation may change, but beyond that, they do not expect significant changes in cooperation. If the cooperation with the security services does not go well, they expect municipalities to play a more important role.

Friendly neighbourhood relations

Alignment in cooperation between European countries to safeguard the public's safety and livability in bordering neighbourhoods is not a topic that has garnered academic scrutiny, possibly due to its nuanced or insignificant effects on a regional or national scale. However, especially as the region of Limburg and the German province of Nordrhein-Westfalen now face a time where both areas experience a form of legalisation, the question remains whether this new time will protect the livability in these border areas and neighbouring living spaces through cooperation in policy and political behaviour.

The opinion of the public on this topic is divided, averaging around the neutral point but with enough participants both disagreeing and agreeing with a potential increase in an improvement of political cooperation across the border (regional and national). The German director in addiction research calls for an exchange in information between governmental bodies to assess the progress and impact of the legalisation, also to plan ahead on potential longer term effects that could occur. Mayor Dassen shares that, to her knowledge, no political discussions have started between Dutch, Belgian and German border municipalities on the impacts of the national cannabis legalisation so it will presumably be something for a future assessment. However, more in practical terms, Mayor Dassen expects residents of the Dutch-German bordering neighbourhoods to suffer from less problems due to the legalisation as the government

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[72] Knottnerus, J. A., Blom, T., van Eerden, S., Mans, J. H., van de Mheen, D., de Neeling, J. N. D., ... & van den Brink, W. (2023). Cannabis policy in The Netherlands: Rationale and design of an experiment with a controlled legal ('closed') cannabis supply chain. *Health policy*, *129*, 104699. https://www.sciencedirect.com/science/article/pii/S016885102200313X

starts producing and taking away the way of making revenue for criminals. This is also the intention of the Dutch experiments on governmental cultivation of cannabis, which resonates with the German legislation.

Cross-border trafficking and law enforcement cooperation

Lots of data has been collected on the cross-border trafficking in the EMR.[73] Because of the strategic use of the borders, organised criminal groups are facilitated in the production, export and smuggling of drugs. To contrast cannabis-related criminal activities, an effective mechanism of cooperation between border regions is much needed.

Already in 1985, the Schengen Agreement was signed. The Schengen Agreement is an international treaty signed by five European countries: Germany, France, Belgium, the Netherlands, and Luxembourg. The agreement aimed to gradually abolish border checks at the internal borders of the signatory countries, allowing for the free movement of people within the Schengen Area. With the Schengen Implementation Convention the parties aimed to strengthen cooperation in combating crime, with a particular focus on illegal activities such as the trade in narcotics and firearms.[74]

While addressing the topic of law enforcement cooperation within the EMR with the Police Officer Leonie Bouwknegt, from Maastricht, she explained how international and cross border law enforcement mechanisms have been activated, involving the EMR. Some examples are:

- Grensoverschrijdend Politieteam[75] (CPT): a unique collaboration between German and Dutch police units;[76]
- Niederländisch-Belgisch-Deutsche Arbeitsgemeinschaft der Polizei (NeBeDeAgPol): a working group of police authorities directors in the EMR that has a working group on drugs and shares information on suspects to investigate;[77]
- Bureau of European Cooperation (BES): it aims at promoting international criminal law cooperation between Germany, Netherlands and Belgium, in particular in the EMR and Euregio Rhine-Maas-Noord.[78]

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[73] Noack, J. & Nelen, H. (2023). Drug-related organized crime in the Meuse Rhine EU-region and the role of national borders. In: Nelen, H. & Siegel, D. (eds.) (2023). *Organized crime in the 21st century: Motivations, Opportunities and Constraints*. Switzerland: Springer Cham, p. 63-83.

[74] Fijnaut, C. (2016). The Meuse–Rhine Euroregion: A Laboratory for Police and Judicial Cooperation in the European Union. In *The Containment of Organised Crime and Terrorism* (pp. 771-791). Brill Nijhoff. https://doi.org/10.1163/9789004281943_043

[75] Translated to "Cross border Police Team" from Dutch.

[76] Provincie Limburg. (2023). *Unieke samenwerking tussen Nederlandse en Duitse agenten.* https://www.limburg.nl/actueel/nieuws/nieuwsberichten/2023/augustus/unieke-samenwerking-tussen-nederlandse/

[77] Euregio. (n.d.). NEBEDEAGPOL. https://euregio-mr.info/en/themen/sicherheit/nebedeagpol.php

[78] Openbaar Ministerie (n.d.) Bureau voor Euregionale Samenwerking (BES). https://www.om.nl/onderwerpen/internationale-samenwerking/bes

Despite the existence of these cooperation mechanisms, significant challenges remain in the sharing of information and techniques. The Police Officer highlighted these issues, expressing concerns about the lack of cooperation among law enforcement agencies across the region. She noted that criminal activities related to cannabis are unlikely to be confined to the Netherlands alone and likely occur in Belgium and Germany as well.

The officer expressed a strong interest in enhancing cooperation with both Belgian and German police forces, pointing out that while the necessary methods and expertise for such collaboration exist, they are currently underutilised. She stressed that differing data systems and organisational structures across the countries pose significant barriers to effective collaboration. Improved communication and cooperation could streamline the development of joint interventions, making it easier to address overlapping criminal activities and improve overall law enforcement efficacy in the region.

About the cooperation between law enforcement agencies in the EMR, Professor Nelen pointed out the difficulties that law enforcement faces in investigating the cross-border cannabis illegal market, given the dissimilar legal systems and different investigative and cultural habits. Nevertheless, cooperation and sharing of data would have a valuable impact on the fight against the illegal market. Professor Nelen suggests the creation of an international expert group (including, for instance, police, academics, prosecutors) that works with an observation-driven approach: starting with monitoring the situation that serves as a base for the creation of a crime analysis and proceeding by creating ad hoc and smart interventions.

Social perception

Popular opinions on the consequences of cannabis legalisation are diverse. Reports from US and Canadian studies highlight that supporters emphasise economic benefits such as tax revenue, job creation, and opportunities for growth [79]. They also point to reduced criminalization and social justice benefits, including fewer arrests for non-violent offences and addressing racial disparities. Additionally, medical benefits of cannabis for treating conditions like chronic pain and epilepsy are noted [80]. Opponents, however, express concerns about public health, including increased youth usage, impaired driving, and the potential for cannabis use disorders. There are also worries about workplace safety and productivity[81].

These sentiments were shared partially during interviews with Dr. De Sousa Fernandez Perna and local citizens of the cross-border region. According to the psychopharmacologist, cannabis legalisation is

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[79] Carliner, H., Brown, Q. L., Sarvet, A. L., & Hasin, D. S. (2017). Cannabis use, attitudes, and legal status in the U.S.: A review. Preventive Medicine, 104, 13–23. https://doi.org/10.1016/j.ypmed.2017.07.008

[80] Harris-Lane, L. M., Drakes, D. H., Donnan, J. R., Rowe, E. C., Bishop, L. D., & Harris, N. (2023). Emerging Adult Perceptions of Cannabis Consumption Post-Legalization: Considering Age and Sex Differences. Journal of Adolescent Health, 72(3), 404–411. https://doi.org/10.1016/j.jadohealth.2022.10.008

[81] Gali, K., Winter, S. J., Ahuja, N. J., Frank, E., & Prochaska, J. J. (2021). Changes in cannabis use, exposure, and health perceptions following legalization of adult recreational cannabis use in California: a prospective observational study. Substance Abuse Treatment, Prevention, and Policy, 16(1). https://doi.org/10.1186/s13011-021-00352-3

anticipated to shift social perceptions in German society, with variations across different demographic groups influenced by generational attitudes and media portrayal.

Older generations, shaped by historical stigma and societal norms, may view cannabis with caution. Legalisation might gradually change their views, but significant increases in consumption are unlikely, whereas younger individuals, who are more open to cannabis use and influenced by contemporary media, may experience a more pronounced shift towards acceptance and potentially increased usage. The utilisation and regulation of media, they say, plays a critical role in shaping public perception. Positive portrayals can normalise cannabis use, especially for younger audiences, while media emphasising risks can maintain societal caution. Therefore, it is crucial to have a good understanding of the medial influence and corresponding regulations for the presence of cannabis in the media. Overall, the legalisation might lead to greater social acceptance without necessarily increasing the consumption, as individual backgrounds and experiences heavily influence personal perceptions and behaviours.

One of the most relevant topics when it comes to how people experience the legalisation of cannabis is public nuisance, which has been extensively debated in the Netherlands.[82] When addressing issues of social perception with the criminologist Hans Nelen, he highlighted how public nuisance could constitute a problem for the population; more specifically, people might be annoyed or scared of the noise in the streets, people grouping together, and possible deviant behaviour. Additionally, people might also associate the smell of cannabis with feelings of unsafety and discomfort, even when there is actually no risk of criminal actions, making the legalisation of cannabis even more controversial.

In border regions, cross-cultural exchanges could blend attitudes and behaviours, with potential increases in cross-border cannabis tourism due to differing legal statuses in neighbouring countries. However, opinions from people living in these regions, such as a resident from the Netherlands, suggest minimal impact. They believe many Germans will continue to purchase cannabis in the Netherlands, expecting no significant changes in drug tourism or repercussions for locals and interviews with residents from the German border areas reflect this belief.

In contrast, participants of the survey anticipated no changes in opinions or changes in attitudes due to the cannabis legalisation in Germany. A significant portion, 33.3%, neither agree nor disagree, indicating a neutral stance. Meanwhile, 34.7% somewhat agree and 6.9% strongly agree, together making up 41.6% of the respondents who perceive potential positive effects. However, the mean score of 3.21 suggests a slight overall tendency towards agreement, reflecting a generally positive outlook with considerable neutrality and disagreement among respondents.

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[82] Bieleman,B, S. Biesma, J. Snippe, A. Beelen. (2009). *Literature study on drug-related nuisance*. Intraval.

6.   Conclusion and recommendations for a Euroregional perspective

Substantive Conclusions

Internal Market and Freedoms of Movement

The EU's internal market principles support labour mobility across member states. However, the economic impact of cannabis legislation in Germany, Belgium, and the Netherlands is currently limited by restrictive cannabis club regulations. These restrictions inhibit the growth of new and existing businesses, dampening potential employment growth compared to more open markets like the U.S. In the Meuse-Rhine region, labour mobility is primarily driven by broader economic opportunities rather than cannabis legislation. If Germany adopts commercial cannabis sales, it could significantly enhance job prospects and economic activity, benefiting sectors like advertising, communication, and investment. Thus, the potential for cannabis legislation to positively impact labour mobility and economic growth in the region hinges on adopting more commercial-friendly policies.

Health and Protection of Public Health

Germany can learn from successful strategies in Canada, the U.S., and the Netherlands, which focus on education, harm reduction, and community collaboration. For example, Canada uses youth-focused campaigns, the U.S. has state-specific harm reduction strategies, and the Netherlands reinvests cannabis tax revenue into prevention and treatment programs. While Canada maintains strict quality control standards, the Netherlands faces challenges due to its more lenient policies. Germany's legislation enforces strict quality assessments to ensure product safety. Effective strategies include comprehensive education, strong community partnerships, and balanced quality control measures to prevent a shift to the black market.

Criminal Proneness

From a criminological perspective, it is clear that the illegal market will adapt to legalisation, though it will not disappear. Legalisation is unlikely to increase criminal behaviour significantly; however, it may lead to minor deviant conduct and public discomfort. Managing these minor disruptions effectively is essential to maintain public confidence in the new legal framework.

Addiction Prevention

Cannabis legalisation poses public health concerns, especially for adolescents and young adults. Early use can impair academic performance and mental health, and regular use is linked to various health issues, such as respiratory problems and cardiovascular diseases. Legalisation has been associated with increased household cannabis presence and maternal use during pregnancy, potentially affecting child development. While data suggests citizens do not anticipate a significant increase in use post-legalization, there is a

strong emphasis on addiction prevention. Germany can mitigate these risks through targeted regulations and educational campaigns.

Tourism

The impact of Germany's cannabis legalisation on drug and coffeeshop tourism in the Netherlands remains uncertain, depending on factors like pricing and ease of cannabis acquisition for Germans. Reduced drug tourism to the Netherlands could lead to decreased economic activity but also less public nuisance. Drug tourism to Germany and Belgium is not expected to change significantly, although it is too early to draw definitive conclusions. Monitoring these trends will be essential for understanding the long-term effects on regional tourism dynamics.

Consumer Protection and Safety

Legal cannabis sales must prioritise consumer well-being and comply with strict consumer protection laws. The potential impact of THC potency on mental health requires further research, as post-legalization data indicates that illegal cannabis is often cheaper and stronger. Border residents anticipate benefits from legalisation in terms of safety through quality control, similar to Dutch governmental cannabis experiments. Germany's legislation, which includes sample testing and safeguarding well-being, suggests that consumers may be more protected under a regulated system.

Economic Development of Border Entrepreneurs

In Limburg, nearly 30 coffee shops near the German and Belgian borders benefit from cross-border customers, boosting local Dutch businesses. German cannabis legalisation might shift this economic benefit to Germany, though the overall impact remains uncertain. Opinions among border residents are cautiously optimistic, while experts hold varied views. Future research should assess the broader economic impact of adjacent cannabis consumption over the long term.

Friendly Neighbourhood and Cross-Border Policy Cooperation

Cross-border cooperation on cannabis legalisation lacks academic scrutiny and political dialogue. Public opinion is divided, but experts call for more information exchange to assess impacts. The mayor of Kerkrade believes that legalisation may reduce criminal revenue, benefiting border residents. Effective cross-border policy cooperation in the EMR-Euregio will depend on cultural affinities and trust-based elements. Enhanced international alignment and comparative learning are crucial for improving cannabis policies and addressing differences in laws and regulations.

Law Enforcement

The cross-border regions of the EMR have developed international mechanisms to enhance law enforcement cooperation against drug trafficking. However, more governmental resources are needed to

implement effective systems for sharing information and coordinating operations. Strengthening these mechanisms is essential for addressing the evolving challenges posed by cannabis legalisation.

Social Perception

Opinions on cannabis legalisation are diverse. Supporters emphasise economic benefits, reduced criminalization, and medical uses, while opponents express concerns about youth usage, impaired driving, and workplace safety. Legalisation is likely to shift social perceptions in German society, particularly among younger generations. Concerns about public nuisance and cross-border cannabis tourism persist, though survey data reveals mixed attitudes. There is a slight tendency towards a positive outlook, but significant neutrality and disagreement remain.

In conclusion, Germany's cannabis legalisation has the potential to bring both positive and negative cross-border effects. Careful policy design, continuous monitoring, and international cooperation will be essential to maximise benefits and mitigate risks.

Outlook

As this ITEM Cross-Border Impact Assessment has a broad scope and thus many possible influencing variables, a number of limitations are present. Firstly, the sample sizes for the surveys and interviews and the number of relevant articles are relatively small, potentially causing issues for the generalizability of findings. Secondly, as this research is mostly done ex-ante, many retrieved findings are based on assumptions and comparisons. Thirdly, even though the interviewed individuals are certainly relevant for the study and are up to varying degrees aware of the German cannabis legalisation, none of them are directly affiliated with the passing of the law or its direct societal, political, or European impact. Therefore, even though every effort was made to safeguard internal and external reliability, the academic validity of the findings can be mildly questioned. Fourthly, this research was strictly bound in terms of time and resources, leaving a large amount of topics and variables to be discovered and analysed. Fifthly, the age disparity in the analysed sample could have caused a form of sampling error due to people above 30 being largely underrepresented

Taking all matters into account, future research can thus work in a longer time period, with a larger amount of resources and a much larger sample, to build on the foundation laid by this study. Furthermore, future research can aim for a range of interesting academic and practical targets: a deeper analysis into one of the presented themes, an equally broad research with a significant increase in data collection, an ex-post research to provide the comparison between ex-ante and ex-post, etc. Additionally, more extensive (statistical) data analysis techniques could be applied in combination with varying measurement scales to receive a more thorough response from each participant. Lastly, in-depth interviews with individuals directly affiliated with the German legalisation, or its cross-border effects, have the potential to provide highly impactful and insightful input for a continuation of research in this field.

All in all, this research has laid the foundation for an academic stream of thought and scrutiny in the field of border impacts originating from cannabis legislation, taking into account multiple perspectives and

aspects from society and politics. Aspirations for an extensive and fully holistic overview of impactful factors were unfortunately thwarted by scarce resources and should not be forgotten but used as a vision for upcoming Cross-Border Impact Assessments.

7. Appendix

Survey questions

ITEM survey

Thank you for taking the time to participate in our questionnaire aimed at understanding the potential effects of the legalisation of cannabis in Germany on cross-border areas, specifically the Netherlands and Belgium.

This survey is conducted by a team of students from Maastricht University in collaboration with the Institute for Transnational and Euroregional cross border cooperation and Mobility (ITEM). Your participation in this questionnaire will provide valuable insights into public opinion, which can inform policymakers, researchers, and stakeholders involved in cross-border cooperation initiatives.

The questionnaire is anonymous, and your responses will be treated with confidentiality. The survey will not take longer than 7 minutes.

Thank you for taking the time to share your views and contribute to our research efforts. Sincerely, PREMIUM ITEM Team Maastricht University

The German Parliament ratified the Cannabis Act on February 23, 2024, legalising the recreational use of cannabis. It is important to note that the legal framework created by the German government is notably different from that of other European countries, such as the Netherlands, and those overseas. The legalisation of cannabis in Germany is organised into two main pillars, although the second pillar—concerning the sale of cannabis in specialist shops—remains uncertain. The first pillar regulates the possession, consumption, and cultivation of cannabis both privately at home and collectively in 'cannabis clubs'. To obtain cannabis from a growers' association, individuals must have resided in Germany for more than six months, be at least 21 years old, and be a member of a so-called cannabis club - required to operate on a non-commercial basis. Adults aged 21 and over are allowed to acquire up to 50 grams per month, while younger adults aged 18-21 can obtain 30 grams per month, with a THC content not exceeding 10%. Non-members are only permitted to purchase propagating materials, not cannabis flowers. In stark contrast, the Netherlands offers a more liberal cannabis policy. Dutch coffee shops operate as commercial entities that legally sell cannabis to both residents and foreigners. This approach has cultivated a significant tourist industry centred around cannabis, an element absent from Germany's regulatory model.

Start of Block 1: The following part will focus on your opinion about European integration

The following part will focus on your opinion about European integration

Labour mobility: To what extent do you agree that the legalisation of cannabis in Germany will impact labour mobility? (E.g. Employees commuting from the Netherlands to Germany)

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

Cross-border movement of individuals: To what extent do you agree that the legalisation of cannabis in Germany will impact cross-border movement of individuals? (E.g Belgians moving in to Germany to benefit from legislation)

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

Establishment of businesses: To what extent do you agree that the legalisation of cannabis in Germany will impact the establishment of businesses? (E.g Creation of cannabis-related businesses in border regions)

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

Competition: To what extent do you agree that the legalisation of cannabis in Germany will impact the competition in neighbouring countries? (E.g Will competition among cannabis-related businesses increase?)

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)

o Strongly agree (5)

To what extent do you agree that Germany's cannabis legalisation will positively influence public health about cannabis use in neighbouring countries such as the Netherlands and Belgium? (prevention, education about cannabis, prevention strategies, and educational campaigns)

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

The legalisation of cannabis in Germany will make me travel more to the country.

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

I believe the legalisation of cannabis in Germany will have an impact on my health.

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

End of Block: The following part will focus on your opinion about European integration

Start of Block: The following block focuses on the Socio-economic and sustainable development

Tourism: To what extent do you agree that Germany's cannabis legalisation will lead to increased tourism, specifically related to cannabis tourism?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Criminal proneness pre- and post-legalisation: To what extent do you agree that the legalisation of cannabis in Germany will lead to a decrease in cannabis-related criminal activities?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Addiction prevention: To what extent do you agree that the legalisation of cannabis in Germany will require stronger addiction prevention measures, given the potential increase in cannabis presence in homes?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Considering Germany's focus on addiction prevention, including the launch of a user-friendly online platform by the Federal Center for Health Education, could these strategies be effective in curbing addiction in the neighbouring countries, particularly in the Rhine-Meuse Euroregion?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Consumer protection, safety and of consumers: To what extent do you agree that Germany's cannabis legalisation will improve consumer protection and safety? Example: The cannabis should have sufficient quality, according to the German inspection, for it to be distributed.

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Economic development of border entrepreneurs: To what extent do you agree that the legalisation of cannabis in Germany will lead to an increased revenue for entrepreneurs in the German border region, compared   to   their   situation   prior   to   the   German   bill?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

End of Block: The following block focuses on the Socio-economic and sustainable development

The   following   block   focuses   on   Euroregional   Cohesion

Principal of good cross-border policy cooperation: To what extent do you agree that Germany's cannabis legalisation will foster better cross-border policy cooperation in the Euroregion?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Political cooperation (neighbourhood relation): To what extent do you agree that the legalisation of cannabis in Germany will improve political cooperation between bordering countries and border municipalities?

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

Cross-border trafficking and law enforcement: To what extent do you agree that Germany's cannabis legalisation will affect cross-border trafficking in Belgium, the Netherlands, and Germany? (e.g. cannabis smuggling and law enforcement (police) efforts to counter this)

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

To what extent do you agree that Germany's cannabis legalisation will affect cross-border law enforcement efforts in Belgium, the Netherlands, and Germany? (These would include surveillance and sharing of investigative information between investigative agencies)

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

Social perception: To what extent do you agree that the legalisation of cannabis in Germany will have positive consequences on the thoughts of people living in border regions in their daily lives, considering public opinion and anticipated changes in their communities?

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

The legalisation of cannabis in Germany changed my perspective on cannabis.

- o Strongly disagree (1)
- o Somewhat disagree (2)
- o Neither agree nor disagree (3)
- o Somewhat agree (4)
- o Strongly agree (5)

The legalisation of cannabis will have increase my usage of weed.

o Strongly disagree (1)

o Somewhat disagree (2)

o Neither agree nor disagree (3)

o Somewhat agree (4)

o Strongly agree (5)

End of Block: The following block focuses on Euroregional Cohesion

Start of Block: Block 4

The   following   block   focuses   on   demographic   purposes

What is your gender?

o Male (1)

o Female (2)

o Non-binary / third gender (3)

o Prefer not to say (4)

Please select your age group

o Under 18 (1)

o 18 - 24 (2)

o 25 - 34 (3)

o 35 - 44 (4)

o 45 - 54 (5)

o 55 - 64 (6)

o 65 - 74 (7)

o 75 - 84 (8)

o 85 or older (9)

In which area do you live?

- o German border region (1)
- o Dutch border region (2)
- o Belgium border region (3)

End of Block: Block 4

Survey results

Descriptive Statistics			
Question	*Mean*	*Standard Deviation*	*Skewness*
Labor Mobility	2.67	.979	-.206
Cross-border movement of individuals	3.29	1.238	-.443
Establishment of businesses	3.94	.803	-.738
Competition	3.79	.918	-.915
Public Health	3.44	1.086	-.294
Travel to Germany	2.41	1.190	.124
Impact on personal health	2.04	1.213	.718
Tourism	3.65	1.235	-.916

Criminal proneness	3.79	1.125	-.917
Addiction prevention	3.79	1.113	-.899
Prevention platform	3.07	.909	-.719
Consumer protection & safety	4.32	.601	-.262
Economic development	3.46	.887	-.555
Cross-border policy cooperation	3.30	.852	-.473
Neighbourhood relation	3.06	.902	-.230
Cross-border trafficking and law enforcement	4.01	.661	-.618
Cross-border law enforcement cooperation	3.75	.931	-.553
Social perception	3.21	.963	-.143

Perception change on cannabis	2.22	1.223	.391
Increase in usage of wed	1.87	1.133	.990

ITEM is an initiative of Maastricht University (UM), the Dutch Centre of Expertise and Innovation on Demographic Changes (NEIMED), Zuyd Hogeschool, the city of Maastricht, the Euregio Meuse-Rhine (EMR) and the (Dutch) Province of Limburg.

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