

# Crime Proofing of the New Tobacco Products Directive

Proofing the EU Commission proposal for a revised Tobacco Products Directive against the risks of unintended criminal opportunities



## Written by

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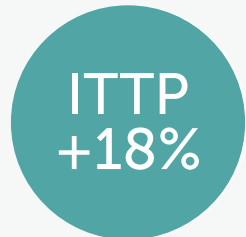
# Does the new EU Tobacco Products Directive (TPD) impact on the Illicit Trade in Tobacco Products (ITTP)?



The EU hypothesises **ZERO IMPACT** on CRIME without providing any supporting evidence



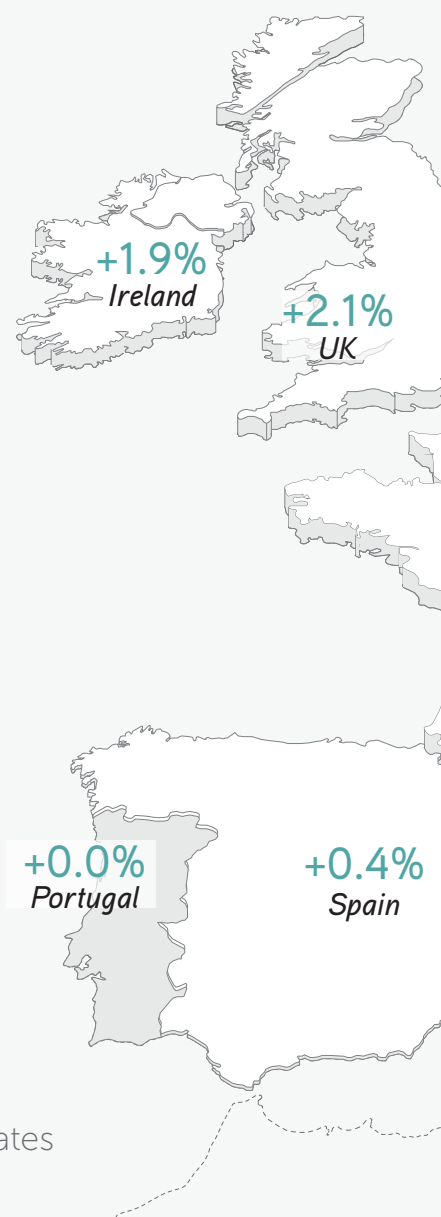
Is the **ZERO HYPOTHESIS** true?



Transcrime's study on **BANS on MENTHOLS & SLIMS** found that the Illicit Trade in Tobacco Products may increase by:

**18%**

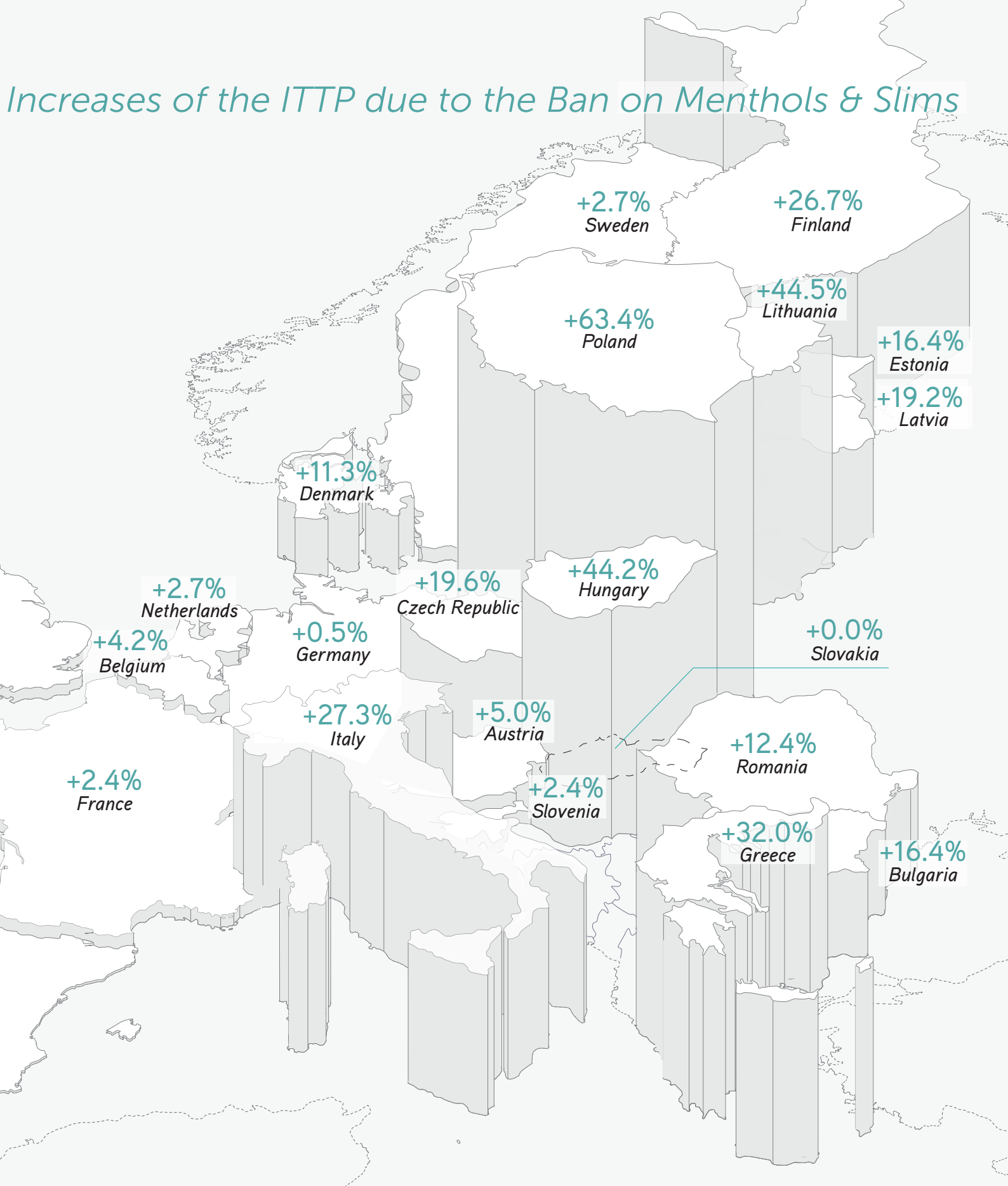
+ € 700 mn Extra Profits for Criminals  
- € 1.7 bn Tax Losses for the EU Member States



The EU Commission should provide evidence on how



# Increases of the ITTP due to the Ban on Menthols & Slims



much the Tobacco Products Directive impacts on crime.



# Executive Summary and Introduction

This study concerns the crime proofing of the Proposal for the Revision of the Tobacco Products Directive presented in December 2012, and it is an update of a study on the crime proofing of the policy options under consideration of the revision of Directive 2001/37/EC.

## Background

The crime proofing of legislation is a scientific approach developed by Transcrime in 2006 (Savona, 2006a; Savona, 2006b; Savona, Calderoni et al., 2006; Savona, Maggioni, et al., 2006; Morgan and Clarke, 2006; Albrecht and Kilchling, 2002). The core idea is that legislation may produce unintended opportunities for crime, thereby having potential criminogenic effects. When these opportunities and where they may occur is known, the legislation may be “*proofed*” against crime.

This study is concerned with the impact of the new Tobacco Products Directive (TPD) on crime, and all the more so on the Illicit Trade in Tobacco Products (henceforth ITTP), an area that has not been considered by any of the impact assessment studies carried out by the EU Commission in preparation of the new Directive. Consequently, no knowledge is officially available on the impact of the new regulation upon the ITTP. This report aims at filling this gap by using the available data and making estimates.

In January 2012, Transcrime presented a study which proofed the policy options under consideration for the revision of EU Directive 2001/37/EC against the risks of unintended criminal opportunities for the illicit trade in tobacco products (Calderoni, Savona, & Solmi, 2012).

The study highlighted that “*DG SANCO paid almost no attention to the impact on the ITTP*” and that “*certain measures considered for the revision of the TPD may have serious consequences*” regarding possible risks of increased ITTP (Calderoni et al. 2012, p.42).

# What has changed in the preparation of the new EU Directive

The impact assessment (IA) released on December 2012 denies the risks of the ITTP. The EU Commission declared *“that the preferred policy options do not – in the assessment of the Commission – lead to increased illicit trade”* (European Commission, 2012a, p. 6).

More than being the result of an IA of the policy options and their trade-off on ITTP, this statement is an a priori assumption that excludes the area of crime from the IA carried out by the EU Commission. This is a serious flaw that may compromise the validity of the results of the impact assessment itself, and which does not comply with the EU’s official impact assessment guidelines (European Commission, 2009).

## Results

Beyond this relevant omission, which does not allow the EU Commission to know whether the revision of TPD has an impact on crime, there are also some improvements to the current regulation. Intervening in cross-border distance sales and in traceability and security features may reduce the opportunities for ITTP crimes. Other consequences are also considered.

However, the crime proofing exercise conducted in this study shows that bans on menthol and slim cigarettes carry significant risks of creating unintended opportunities for the illicit trade in tobacco products.

The effects of a sudden ban and its impact on ITTP crime could be especially serious in those EU countries where banned tobacco products are popular.

The Extended Crime Risk Assessment on the banning of menthol and slim FMC has required a collateral study (see APPENDIX). Notwithstanding limitations of data and research, the assessment on menthol and slim bans suggests that:

- The menthol ban may increase the level of the ITTP in Europe by between 2.9% and 5.1%.
- The slim ban may increase the level of the ITTP in Europe by between 11.2% and 17.0%.
- In Europe, the total ITTP increase may be between 14.0% and 22.1%.
- The yearly expected extra profits for ITTP perpetrators can be estimated at between €0.4 and €1.3 billion (for both menthol and slim cigarettes).
- EU MSs may lose yearly tax revenues amounting to between €1 and more than €2 billion due to the illicit sales of menthol and slim FMC.
- The social costs of ITTP crime may be asymmetrically distributed. Eastern countries and Poland in particular may suffer disproportionate costs compared to other EU Member States.

## Recommendations

The EU Commission should properly apply its own IA rules for determining the impact of tobacco regulation on the ITTP. Only with a complete IA, European Institutions, governments and citizens will be aware of the benefits and costs of the new tobacco regulation. This study also suggests that the impact on crime levels of some of the policies foreseen requires further and more detailed analyses. In one year, some progress has been made, but there is still a need for studies and better data to increase knowledge about the ITTP. This study moves in this direction in the hope that others will follow. A strong reduction of ITTP will benefit all the official stakeholders in legal tobacco markets. Fewer opportunities for the ITTP mean:

- consumers better informed and guaranteed about the standards under which the tobacco products – which they buy – are produced because of less displacement to illegal tobacco markets;
- governments able to better monitor the numbers of tobacco users, understand when their health policies work, realistically plan the contribution of tobacco taxes to their budgets, and prevent the silent transfer of part of this legitimate income to criminals, their organisations, and their activities;
- tobacco manufacturers more oriented to operating only in the legitimate market because they benefit from the reduction of unfair competition by the ITTP and, consequently, from the increase in their market share.

As a concerned stakeholder in the fight against the illicit trade in tobacco products, Philip Morris International (PMI) welcomed the initiative of Transcrime to conduct research on this important area. PMI agreed to contribute financially to the research. However, Transcrime retained full control and stands guarantor for the independence of the research and its results.



# Chapter 1

## *Knowing more about the Illicit Trade in Tobacco Products*

When in 2011 Transcrime started applying crime proofing methodology to the ITTP, it was clear that this topic was fraught with interests and prejudices. Rare research and data had been produced on the size and structure of ITTP (Calderoni et al., 2012). Much more information existed on the health consequences of smoking. The starting point of Transcrime's involvement in the field was the awareness that damages to health and crime are two types of social costs and they should be both addressed. And because the mainstream research on crime and its organisation was more concerned with the reduction of opportunities and situational prevention measures, it would be fruitful to consider the wide range of measures that produce such opportunities, starting with regulation.

Given the dearth of data, Transcrime solicited contributions from colleagues with a real scientific interest in the area and involved all stakeholders in making their data available and collecting more detailed information. In so doing, we were aware that the greater the knowledge about ITTP, the better the policies in its regard would become.

## 1.1 Defining the ITTP

The European Commission defines illicit trade as “any practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase, including any practice or conduct intended to facilitate such activity” (European Commission, 2012a).

The ITTP comprises the various illicit activities summarised in Table 1. For further details see (Calderoni et al., 2012).

**Table 1. ITTP illicit activities**

Source: Calderoni, Savona, and Solmi, 2012

<b>Smuggling/ Contraband</b>	the unlawful movement or transportation (including the online sale) of tobacco products (genuine or counterfeit) from one tax jurisdiction to another without the payment of applicable taxes or in breach of laws prohibiting their import or export ‘contraband’
<b>Counterfeiting</b>	illegal manufacturing in which a product bears or imitates a trademark without the owner’s consent
<b>Cheap Whites, or Illicit Whites</b>	cigarettes are produced legally in one country but normally intended for smuggling into countries where there is no prior legal market for them; taxes in production countries are normally paid, while they are avoided/evaded in destination countries
<b>Bootlegging</b>	legally buying tobacco in a low-tax country and illegally reselling it in a high-tax country
<b>Illegal manufacturing</b>	cigarettes manufactured for consumption which are not declared to the tax authorities
<b>Unbranded tobacco</b>	manufactured, semi-manufactured and even loose leaves of tobacco carrying neither labelling nor health warnings. It may be sold by weight and consumed in roll-your-own cigarettes or in empty cigarettes tubes (“chop-chop” in some countries) or sold in the form of loose cigarettes in large plastic bags (“baggies”)

## 1.2 Transcrime’s Research Agenda on the ITTP

In 2011, Transcrime hosted the Round Table on Proofing EU Regulation against the Illicit Trade in Tobacco Products. Following the Round Table, participants agreed on a Research Agenda on the ITTP (Transcrime, 2011b; Calderoni et al., 2012). The Research Agenda contributes to raising awareness about the global importance of the ITTP and about the role of public and private actors in tackling it. Since 2011, Transcrime has been working on implementation of the ITTP research agenda. Figure presents the state of the art.

**Table 2. Implementing the Research Agenda on the ITTP – the state of the art**

<b>Topic 1</b>	differential perceptions of the ITTP	<i>not yet published</i>
<b>Topic 2</b>	the Extended Crime Risk Assessment on the Preliminary Crime Risk Assessment of the European Tobacco Regulation in force	<i>not yet published</i>
<b>Topic 3</b>	better analysis of the licit and illicit market for tobacco products	<i>First Published in 2013</i>
<b>Topic 4</b>	the crime proofing ex ante of the proposed review of the Tobacco Product Directive	<i>Crime proofing the policy options for the revision of the Tobacco Products Directive (January 2012)</i> <i>Crime Proofing of the New Tobacco Products Directive (July 2013)</i>
<b>Topic 5</b>	a study on the WHO Framework Convention on Tobacco Control and on the Draft Protocol to eliminate illicit trade in tobacco products	<i>First Published in 2012</i>
<b>Topic 6</b>	comparative studies on how the licit and illicit markets vary across countries and regions	<i>Series: The Factbook on the Illicit Trade in Tobacco Products. Issues: United Kingdom (January 2013), Italy (July 2013), Ireland (July 2013).</i>



## What is the Factbook on the ITTP?

The Factbook on the Illicit trade in tobacco products is “an innovative instrument able to shed light on the complex mechanisms behind the ITTP in different countries. [...] Illicit tobacco avoids state regulation and taxation and may jeopardise tobacco control policies. The Factbook will contribute to raising awareness about the global relevance of the ITTP and about the strategies available to prevent it. The Factbook has been developed for a wide readership, from policymakers, through academics, to interested stakeholders, with the intention to develop knowledge-based debates and policies on the ITTP” (Calderoni et al., 2013, p.3).

## 1.3 From the crime proofing of the 2012 policy options to the crime proofing of the 2013 preferred policy options

In 2012, Transcrime already conducted a crime proofing analysis of the policy options reported in the study produced for the Commission by RAND Europe to support the impact assessment process. The study highlighted that “DG SANCO paid almost no attention to the impacts on the ITTP” and that “certain measures considered for the revision of the TPD may have serious consequences” regarding possible risks of increased ITTP (Calderoni et al., 2012, p.42).

Transcrime still argues that regulation should be proofed ex ante in order to prevent unintended criminal opportunities. Analysing the impact of policy options on crime should be a routine activity in the impact assessment methodology.

On December 19<sup>th</sup> 2012, DG SANCO presented the proposal for revision for the TPD Directive and its accompanying impact assessment. The main objective of the revision was “to improve the functioning of the internal market, while ensuring a high level of health protection” (European Commission, 2012a, p. 46, 2012b, p. 49). The impact assessment suggested preferred policy options in five policy areas (Table 3): (1) smokeless tobacco products (STP) and extension of the product scope (i.e. nicotine-containing products (NCP) and herbal products for smoking), (2) packaging & labelling, (3) ingredients/additives, (4) cross-border distance sales and (5) traceability and security features (European Commission, 2012a, p.2).

**Table 3. Preferred policy options suggested by the Impact assessment for the TPD Proposal for revision (December 2012)**

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### **Policy Area 1 – Smokeless Tobacco Products and Extension of the Product Scope**

#### **1a. Smokeless tobacco Products**

*Maintaining ban on oral tobacco and enforcing a stricter labelling and ingredient regulation for STP and for novel tobacco products.* The proposal maintains the ban on oral tobacco (except for Sweden which has an exemption), subjects all novel tobacco products to a notification obligation and all STP to stricter labelling and ingredients regulation (e.g. health warnings on both sides of the package and a ban of products with characterising flavours and increased toxicity or addictiveness). Novel tobacco products placed on the market must respect the rules on labelling (health warnings on both sides) and ingredients regulation (ban on products with characterising flavours). The placing on the market of chewing and nasal tobacco continues to be allowed.

#### **1b. Nicotine Containing Products (NCP)**

*Subject NCP above a certain nicotine threshold to the legislation on medicinal products and the remaining NCP to labelling requirements.* NCP with a nicotine level above a certain threshold may only be placed on the market if they have been authorised as medicinal products on the basis of their quality, safety and efficacy, and with a positive risk/benefit balance under the medicinal products legislation. NCP with nicotine levels below this threshold will be subject to an adapted health warning.

#### **1c. Herbal products (Option 1)**

*Health warnings.* Adapted health warnings are required for herbal products for smoking.

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<b>Policy Area 2 – Packaging and labelling (Option 2)</b>	<i>Mandatory enlarged picture warnings.</i> Combined warnings (picture plus text) of 75% displayed on both sides of the packages of tobacco products, presented in rotation. TNCO levels on the packages are replaced with descriptive information on content, emissions and risks. Display of cessation information (e.g. quit-lines, websites) is added to the packages. Tobacco products other than FMC and RYO are exempted (current TPD rules apply). In addition, the tobacco labelling and packaging and <i>the tobacco product itself shall not include any promotional and misleading elements</i> (e.g. misleading colours, symbols, slim FMC). They shall comply with certain requirements for packages (e.g. cuboid shape, minimum number of and FMC per package) as well as for the size of the warnings.
<b>Policy Area 3 – Ingredients</b>	<i>Mandatory reporting in harmonised format.</i> Manufacturers are obliged to electronically report ingredients (glossary) of tobacco products in accordance with a common format and to provide supporting data (e.g. marketing reports).  <i>Prohibition of tobacco products with characterising flavours and products with increased toxicity or addictiveness.</i> Additives associated with energy and vitality (e.g. caffeine and taurine) or creating the impression that products have health benefits (e.g. vitamins) are prohibited. No flavourings are allowed in filters, papers or packages (e.g. Menthol). Tobacco products other than FMC, RYO and STP (e.g. cigars, cigarillos and pipes) are exempted.
<b>Policy Area 4 – Cross-border distance sale</b>	<i>Notification and age verification system.</i> Retailers of tobacco products intending to engage in cross-border distance sales shall notify their cross-border activities to the Member States where the company has its headquarters and where it intends to sell. Member States may require the retailer to appoint a natural person, who ensures compliance with the TPD of products delivered to customers in the Member States concerned. A mandatory age verification system is foreseen.
<b>Policy Area 5 - Traceability and security features.</b>	EU tracking and tracing system. An <i>EU tracking and tracing system</i> at packet level for tobacco products throughout the supply chain (excluding retail) is introduced. Tobacco manufacturers shall conclude contracts with independent third parties that provide data storage capacities for such system ensuring full transparency and accessibility by Member States at all times. Tobacco products other than FMC and RYO are granted a transitional period of five years.  <i>Security features.</i> Security features against counterfeiting and against illicit/cheap whites on all tobacco products (e.g. holograms). Tobacco products other than FMC and RYO are granted a transitional period for five years.

## 1.4 The neglected impact on the ITTP

The previous study published in 2012 by Transcrime had already pointed out that DG SANCO paid little attention to ITTP in the preparatory study for the impact assessment, notwithstanding evidence suggesting that the illicit market accounts for a large share of the European market (Calderoni et al., 2012).<sup>1</sup>

The impact assessment released on December 2012 did not remedy this shortcoming. Indeed, it completely ignored it when the Commission declared “*that the preferred policy options do not – in the assessment of the Commission – lead to increased illicit trade*” (European Commission, 2012a, p. 6). This assessment is not supported by any scientific evidence; on the contrary, studies have frequently reported that a ban on, or strict limitation of, menthol cigarettes (Policy Area 3) may considerably increase the illicit trade in countries where these products are popular and a relatively large demand already exists (United States Trade Representative, 2010; Compass Lexecon, 2011).

Therefore, the impact assessment process largely ignored ITTP crime risk when it assessed the social impact. This is a serious flaw that may compromise the validity of the results of the impact assessment itself, and which does not comply with the EU official impact assessment guidelines (European Commission, 2009)<sup>2</sup> when they recommend to “*address the likely economic, social and environmental impacts - both intended and unintended - for each option, as well as potential trade-offs and synergies*” (European Commission, 2009, p.31). Still, “*you should list the expected positive and negative impacts of the policy options, including unintended side-effects. This presentation should be made in quantitative terms for all variables for which this is feasible, expressed in deviations from the baseline scenario*” (European Commission, 2009, p.48).

1. As confirmed by previous research conducted by Transcrime (Savona et al., 2006c), European policymakers often do not consider the crime risk implications when drafting new legislation (Transcrime, 2011b).

2. The EU Guidelines suggest some key questions on crime, such as: “*Does the option have an effect on security, crime or terrorism?*”; “*Does the option affect the criminal’s chances of detection or his/her potential gain from the crime?*”; “*Is the option likely to increase the number of criminal acts?*”; “*Does it affect the law enforcement capacity?*” (European Commission, 2009, p.36).

Generally, deficiencies in the social impact analysis have also been highlighted by the Impact Assessment Board, which observes in its most recent report that “[d]espite the Board’s previous recommendations to thoroughly assess social impacts the Board notes that there has been no progress in the initial assessments of these impacts” (2013, p.27). Because the impact assessment on the revision of TPD fails to consider crime in its social impact analysis, it is incomplete and does not address a significant part of the problem.

This study consequently focuses on the new TPD proposal presented by the European Commission in December 2012. As already done in 2012, the new TPD will be analysed using the crime proofing methodology (Savona, Maggioni, et al., 2006).

### ***Recommendation – Strengthening Social Impact Assessment***

*The European Commission should take action as soon as possible to strengthen the quality of the analysis of social impacts which otherwise may undermine the reliability of the entire impact assessment procedure. Providing guidance for crime impact analysis could improve the quality of further EU impact studies on regulation.*

## **1.5 The Proposal for revision of the Tobacco Products Directive 2001/37/EC**

The proposal for revision of the Tobacco Products Directive (COM(2012) 788 final) has been presented on December 19<sup>th</sup> 2012. It receives all the preferred policy options suggested in the impact assessment. Table 4 summarises the main elements of the proposal which could change the TPD currently in force.

**Table 4. TPD Proposal for revision (December 2012): main changes**

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#### **TITLE II – Tobacco products**

##### ***Ingredients and emissions (Chapter I) (Art. 3-6)***

##### ***Art. 5 Reporting of ingredients and emissions***

Manufacturers are obliged to *electronically report ingredients* (glossary) of tobacco products in accordance with a *common format* and to provide supporting data (e.g. marketing reports).

##### ***Art. 6 Regulation of ingredients***

*Prohibition of the use of additives* in tobacco products which contain: (a) vitamins or similar, or (b) caffeine and taurine or other stimulant compounds, (c) colouring properties for emissions.

*Prohibition of the use of flavourings in the components of tobacco products* such as filters, papers, packages, capsules or any technical features allowing modification of flavour or smoke intensity (*Prohibition of Menthol FMC*). Tobacco products other than FMC, RYO and STP (i.e. cigars, cigarillos and pipes) are exempted.

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##### ***Labelling and Packaging (Chapter II) (Art. 7-14)***

##### ***Art. 9 Combined health warnings for tobacco for smoking***

Each unit packet and any outside packaging of tobacco for smoking shall carry combined health warnings which shall: (a) be comprised of a text warning and a corresponding colour photograph specified in the picture library, (b) include smoking cessation, (c) *cover 75% of the external area* of both the front and back surface of the unit packet and any outside packaging.

##### ***Art. 12 Product Description***

The labelling shall not include any element or feature that: (a) promotes a tobacco product by means that are false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions; (b) suggests that a particular tobacco product is less harmful than others or has health or social effects; (c) refers to flavour, taste, any flavourings or other additives or the absence thereof; (d) resembles a food product.

*Cigarettes with a diameter of less than 7.5 mm shall be deemed to be misleading (Prohibition of slim FMC).*

### **Art. 14<sup>3</sup> Traceability and Security Features**

*EU tracking and tracing system.* An EU tracking and tracing system at packet level for tobacco products throughout the supply chain (excluding retail) is introduced. Tobacco manufacturers shall conclude contracts with independent third parties that provide data storage capacities for such system ensuring full transparency and accessibility by Member States at all times (par. 6). *Security features.* Adoption of security features against counterfeiting and against illicit/cheap whites on all tobacco products (e.g. holograms).

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#### **Tobacco for oral use (Chapter III)**

##### **Art. 15**

No changes compared to the current TPD.

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#### **Cross-border distance sales of tobacco products (Chapter IV)**

##### **Art. 16**

*Notification and age verification system.* Retailers of tobacco products engaged in cross-border distance sales shall notify their cross-border activities to the Member States where the company has its headquarters and where it intends to sell. Member States may require the retailer to appoint a natural person, who ensures compliance with the TPD of products delivered to customers in the Member States concerned. A mandatory age verification system is foreseen.

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#### **Novel Tobacco products (Chapter V)**

##### **Art. 17**

*Duty of notification, labelling and ingredients requirements.* Manufacturers and importers of tobacco products have to notify the competent authorities of Member States of any novel tobacco product they intend to place on the markets of the MS concerned. In addition NTP placed on the market must respect the rules on labelling (health warnings on both sides) and ingredients regulation (ban on products with characterising flavours).

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### **TITLE III – Non Tobacco Products**

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#### **Nicotine Containing Products (NCP)**

##### **Art. 18**

Subject NCP above a certain nicotine threshold to the legislation on medicinal products.  
Subject NCP below a certain nicotine threshold to labelling requirements.

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3. Under Art. 14, TPD revision refers to delegated for: (a) defining the key elements (such as duration, renewability, expertise required, confidentiality) of the contract referred to in par. 6, including its regular monitoring and evaluation; (b) defining the technical standards to ensure that the systems used for the unique identifiers and the related functions are fully compatible with each other across the Union and (c) defining the technical standards for the security feature and their possible rotation and to adapt them to scientific, market and technical development.

# Chapter 2

## *Initial Screening of the TPD proposal*

Initial Screening (IS) is the first step in the Crime Risk Assessment (CRA) process. Its aim is to select proposals, which should undergo a CRA process. It is applied to the policy options included in the proposal for the revision of the TPD (European Commission, 2012d). For further details on IS see (Calderoni et al. 2012, p.15-16).

### Ingredients and emissions (Art. 3-6)

Mandatory reporting in harmonised format (Art. 5). This policy option falls within **risk indicator 1 (fee or obligation)** since it obliges manufacturers to electronically report the ingredients of tobacco products in accordance with a common format and provide supporting data (e.g. marketing reports), and it does not allow placement on the market of new or modified tobacco products before the submission of ingredients data. It may have consequences also for the prices of tobacco products, failing within **risk indicator 4 (tax or cost)**.

Ban on characterizing flavours, including menthol (Art. 6). This policy option falls within **risk indicators 1 (fee or obligation) and within risk indicator 5 (availability restriction)** since it prohibits tobacco products with: a) additives associated with energy and vitality or creating the impression that products have health benefits (e.g. vitamins), and b) flavourings in filters, papers or packages (e.g. menthol).

### Labelling and packaging (Art. 7-14)

Mandatory enlarged picture warnings (Art. 9). The increased size of combined warnings (picture plus text) falls within **risk indicator 1 (fee or obligation)**, and increasing packaging costs may have consequences also for the prices of tobacco products, thus failing within **risk indicator 4 (tax or cost)**.

Impose stricter labelling (Art. 11) regulation for Smokeless tobacco products. The introduction of a stricter labelling regulation falls within **risk indicator 1 (fee or obligation)** and may also have consequences for the prices of tobacco products, thus failing within **risk indicator 4 (tax or cost)**.

*Ban of misleading colours, symbols and slim FMC (any promotional and misleading elements in tobacco labelling and packaging and on the tobacco product itself (Art. 12).* This policy option falls within **risk indicators 1) (fee or obligation) and 5) (availability restriction)** since it prohibits a demanded product.

*EU tracking and tracing system and security features (Art. 14).* The policy option falls within **risk indicator 1) (fee or obligation) and 4) (tax or costs)** since it imposes on tobacco manufacturers an EU tracking and tracing system at packet level for tobacco products together with security features against counterfeiting and against illicit/cheap whites on all tobacco products (e.g. holograms).

## Tobacco for oral use (Art. 15)

*Maintaining the ban on oral tobacco (except for Sweden which has an exemption) and maintaining the placement on the market of chewing and nasal tobacco (Art. 15).* These options are part of a no change scenario. Therefore, they do not inadvertently create new crime opportunities. For this reason, they do not fall within any of the risk indicators of the initial screening and no further assessment should be carried out.

## Cross border distance sale of tobacco products (Art. 16)

*Notification and age verification system (Art. 16).* The policy option falls within **risk indicators 1) (fee or obligation) and 4) (tax or cost)** since it imposes on cross-border sellers an obligation of notification and implementation of the mandatory age verification system.

## Novel tobacco products (Art. 17)

*Impose duty notification and stricter labelling and ingredient regulation and novel tobacco products (Art. 17).* The introduction of duty of notification and of a stricter labelling regulation falls within **risk indicator 1) (fee or obligation)** and may also have consequences for the prices of tobacco products, thus falling within **risk indicator 4) (tax or cost)**. Stricter ingredient regulation (ban on products with characterising flavours and increased toxicity or addictiveness) falls within **risk indicators 1) (fee or obligation) and 5) (availability restriction)** since it may result in alteration to the taste of tobacco products.

## Nicotine containing products (Art. 18)

*Subject NCP above a certain nicotine threshold to the medicinal products legislation and the remaining NCP to labelling requirements (Art. 18).* TPD currently does not regulate NCP. The new regulation falls within **risk indicator 1) (fee or obligation)** since it imposes an adapted health warning (for NCP with nicotine levels below the threshold) and a preliminary medicinal authorisation (for NCP with nicotine levels above the threshold). Limiting the placement on the market of NCP with nicotine levels above a certain threshold falls within **risk indicator 5) (availability restriction)**.

## Herbal products for smoking (Art. 19)

*Health warnings (Art. 19).* Herbal products are not currently regulated by TPD. The new regulation falls within **risk indicator 1) (fee or obligation)** since it imposes an adapted health warning.

## 2.1 Results

Overall, the IS highlighted that most of the articles of the TPD proposal fall within the risk indicators concerning fees and obligations, imposing taxes or costs or restricting the availability of the tobacco products (Table 5). In other words, most of innovations recommended are considered at risk by the first step of the Crime proofing methodology. Since they impose fee/obligation or tax/cost or restrict the availability of tobacco products, those measures could generate opportunities for crime. Therefore it is necessary to further investigate through the Preliminary Crime Risk Assessment (PCRA) the possible magnitude of those crime risks.

**Table 5. Measures of the TPD proposal falling within the 7 risk indicators of the Initial Screening**

Legal elements of the proposal	Articles of the TPD proposal	Risk indicators						
<b>Ingredients and emissions (Art. 3-6)</b>	Mandatory reporting in harmonised format (Art. 5)	■			■			
	Ban on characterizing flavours, including menthol (Art. 6)					■		
<b>Labelling and packaging (Art. 7-14)</b>	Mandatory enlarged picture warnings (Art. 9)	■			■			
	Impose stricter labelling (Art. 11) regulation for Smokeless tobacco products	■			■			
	Ban of misleading colours, symbols and slim FMC (Art. 12)	■				■		
	EU tracking and tracing system and Security features (Art. 14)	■			■			
<b>Cross border distance sale of tobacco products (Art. 16)</b>	Notification and age verification system (Art. 16)	■			■			
<b>Novel Tobacco Products (Art. 17)</b>	Duty of notification, stricter labelling and ingredient regulation (Art. 17)	■			■	■		
<b>Nicotine Containing Products (Art. 18)</b>	Subject NCP above a certain nicotine threshold to the medicinal products legislation, and the remaining NCP to labelling requirements (Art. 18)	■				■		
<b>Herbal products (Art. 19)</b>	Health warnings (Art. 19)	■				■		
		Fee/Obligation	Concession	Grant, Subsidy or Compensation Scheme	Tax or Cost	Availability Restriction	Law Enforcement	Regulatory Power



# Chapter 3

## Preliminary Crime Risk Assessment

The PCRA analyses the vulnerability of the tobacco market to crime (section 3.1) and discusses possible crime risks arising from the preferred policy options (section 3.2).

### 3.1 Vulnerability of the European Tobacco Market

The analysis of the vulnerability of the European tobacco market is based on two dimensions. The first is how the tobacco market is *attractive* to crime. The second relates to the *accessibility* of the tobacco market to criminals. Since this analysis has been carried out in our recent study (Calderoni et al., 2012), this section provides only a summary of and an update on the results.

Table 6. *Attractiveness of the Tobacco Market to Crime*

<b>Levels of crime</b>	The ITTP is a large component of the EU tobacco market and its magnitude is increasing	<i>EU ITTP grew from 8.5% of total consumption in 2007 (Joossens et al., 2009, p.10) to 11.1% in 2012 (KPMG, 2013)</i>	<i>A wide variety of actors are involved in ITTP (some legitimate manufacturers in the tobacco industry, organised or terrorist groups, and other criminals)</i>
<b>Profitability</b>	The ITTP is in general extremely profitable	<i>Tobacco products are heavily taxed in the EU MSs (80% mean tax share) (DG TAXUD, 2011, p.6)</i>	<i>Cigarettes are the commodity with the highest fiscal value per weight (Joossens, 1998, p.149-150)</i>
<b>Risk of Detection</b>	The risk of detection in the commission of the ITTP is very low	<i>Sheer size of the illicit market Difficult detection of the ITTP International cooperation against the ITTP is still weak</i>	<i>The policing of the ITTP seems rarely to be a priority for national law enforcement agencies The stigma normally associated with criminal activity does not always apply to the ITTP</i>



**Table 7. Accessibility of the Tobacco Market to Criminals**

<p><b>Violence and/or Corruption (modus operandi)</b></p>	<p><i>The ITTP also competes with the legal market for tobacco products; the levels of violence should be particularly low, or otherwise customers would move rapidly to the legal sector</i></p> <p><i>The ITTP is frequently related to bribery and corruption</i></p>
<p><b>Exploitability of Factors, Products or Structures of the Tobacco Market for Crime</b></p>	<p><i>Given the extent of the illicit market and the significant demand for illicit tobacco products, the factors, products and structures of the tobacco market are exploitable for criminal purposes</i></p>

### What changed in 2012 and 2013? Increasing awareness of the ITTP problem

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- The Protocol to Eliminate Illicit Trade in Tobacco Products to the WHO Framework Convention on Tobacco Control (FCTC) was adopted during the fifth session of the Conference of the Parties to the WHO Framework Convention on Tobacco Control by Decision FCTC/COP5 (1) on November 12<sup>th</sup> 2012 and it is now open for signature (United Nations, 2012). However, its actual impact in strengthening cooperation against the ITTP remains unknown and its effectiveness may vary greatly according to the number and the geographical location of ratifying countries (Johnson, 2009; Reed, 2013).
  - Greater attention was paid to the ITTP in the last Olaf and Eurojust reports (OLAF, 2012; Eurojust, 2012) whilst the ITTP still has a minor role in the 2013 report by Europol (Europol, 2013). The Commission has drafted an action plan to fight the smuggling of cigarettes and alcohol along the EU’s Eastern border (European Commission, 2011). As a consequence, Olaf set smuggling of cigarettes into the EU as a priority in its 2012 management plan (OLAF, 2012b).
  - Interpol signed an agreement with the Digital Coding & Tracking Association – founded by British American Tobacco, Imperial Tobacco Group, Japan Tobacco International and Philip Morris International – to develop and promote tracking and tracing standards. Known as Codentify, this is accessible via the new INTERPOL Global Register (IGR), which serves to fight against illicit trade (Interpol, 2012).
  - In June 2013 the Commission presented a comprehensive EU Strategy on the fight against cigarette smuggling and other forms of illicit trade in tobacco products (European Commission, 2013a).
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## 3.2 Crime Risks Arising from Specific Main Actions

### Ingredients and Emissions

#### Art. 5 Mandatory reporting in harmonised format

##### *Envisaged Crime Risks*

Transfer of the increased reporting costs to final consumers may increase retail prices, thereby boosting the ITTP in EU.

##### *Crime Risks Probability*

LOW – According to the Commission, “the costs for introducing such a system on a mandatory basis would be marginal and largely off-set by the savings generated by the use of one single format across the EU” (European Commission, 2012a, p. 99).

#### Art. 6 Ban on characterising flavours, including menthol

##### *Envisaged Crime Risks*

Legitimate tobacco products may become less palatable than illicit products for consumers, who may decide to buy illicit FMC with characterising flavours and products with increased toxicity or addictiveness (since there is no legal alternative); this may increase the ITTP in EU Member States.

##### *Crime Risks Probability*

LOW – For candy and fruity flavours. The ban on ingredients such as candy and fruity flavours may have a marginal impact on the ITTP since the market share of such products is negligible.

HIGH – For Menthol FMC. According to Euromonitor International 2013 data (2013a), Menthol FMC represent more than 10% of the legal tobacco market in five EU MSs (Finland, Poland, Sweden, Denmark, Estonia). Studies have frequently reported that a ban on, or strict limitation of, menthol cigarettes may considerably increase the illicit trade in countries where these products are popular and a relatively large demand already exists (United States Trade Representative, 2011; Compass Lexecon, 2011). A sudden limitation on the availability of menthol cigarettes might unintentionally create opportunities for the ITTP.

### Labelling and Packaging

#### Art. 9 Mandatory enlarged picture warnings

##### *Envisaged Crime Risks*

Transfer of the increased labelling production costs to final consumers may increase retail prices, which may boost the ITTP in EU Member States.

Increased standardised packaging may facilitate counterfeiting and thus increase the ITTP in EU Member States.

Increased standardised packaging may weaken brand relevance, so that consumers may decide to switch to cheaper cigarettes, even illicit ones (the so-called downtrading).

##### *Crime Risks Probability*

LOW – According to the Commission, the EU harmonisation will reduce the one-off costs, while on-going costs will be higher. “Costs could increase by 1.3-1.5% following the introduction of EU-wide pictorial warnings [...]” with “an annual cost increase for tobacco companies between €59 million and €68 million” (European Commission, 2012a, p. 86).

IMPOSSIBLE TO DETERMINE – The increased standardisation may favour counterfeiting but, at present, it is impossible to determine to what extent. Undoubtedly, the adoption of an effective EU tracking and tracing system and of security features will contribute to reducing the crime risks (see Policy Area 5).

IMPOSSIBLE TO DETERMINE – At present, it is difficult to assess the impact of mandatory enlarged warnings on brand loyalty and consumer behaviours. Roland Berger’s study (2013, p.6) indicates that “the number of cigarettes sold is estimated to fall by 1.6% in the premium segment and 1.2% in the below premium segment” with also a displacement toward the ITTP.

#### Art. 11 Imposing stricter labelling regulation for smokeless tobacco products

##### *Envisaged Crime Risks*

Transfer of the increased labelling production costs to the final consumer may increase retail prices, thereby boosting the ITTP in some Member States.

##### *Crime Risks Probability*

LOW – The increased cost appears limited, and therefore so too does the probability of these behaviours occurring.

#### Art. 12 Ban of misleading colours, symbols and slim FMC

##### *Envisaged Crime Risks*

Legitimate tobacco products may become less recognisable and less attractive than illicit products for consumers, who may decide to buy illicit FMC with misleading colours, symbols, slim FMC.

##### *Crime Risks Probability*

IMPOSSIBLE TO DETERMINE – For any promotional and misleading element (slim FMC excluded). The shift to illicit products depends on the importance that EU consumers give to the brand (through appealing colours, symbols, and slim FMC). Eurobarometer estimated that 23% of EU consumers consider the packaging important in their choice of cigarette brand. The percentage varies widely: from 58% in Slovakia to 10% in Luxembourg (European Commission, 2012a). However, the definition “promotional and misleading element” is too generic, with the consequence that it is impossible to determine whether a sudden ban might encourage EU smokers to buy illicit products.

HIGH – For Slim FMC. According to Euromonitor International 2013 data (2013a), Slim FMC represent more than 10% of the legal tobacco market in several EU MSs (Bulgaria, Romania, Poland, Latvia, Greece, Estonia, Cyprus, Hungary, Lithuania). A sudden ban on slim FMC in EU countries where their consumption is popular may increase the demand for illicit slim FMC.

## Art. 14 EU tracking and tracing system

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### *Envisaged Crime Risks*

Transfer of the increased internal costs to final consumers may increase retail prices, which may boost the ITTP.

### *Crime Risks Probability*

IMPOSSIBLE TO DETERMINE – The key issue concerns costs. Unfortunately, the European Commission, on not providing an overall figure, admits that “it is not easy to fully estimate the costs” (European Commission, 2012a, p.108). Traceability may indubitably contribute to the reduction of smuggling, and counterfeiting as well. According to the European Commission, the EU T&T system reduces illicit contraband by up to 30% in five years (estimate based on industry data). However, it cannot be assumed that the same trend will be observed in the next years since T&T systems cover the market shares controlled by the four main tobacco companies which signed bilateral agreements with the European Commission. In most of the EU tobacco markets, this share is around 95% of the entire market (Euromonitor International, 2013a). More information on the actual implementation of the EU T&T system is needed.

## Art. 14 Security features

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### *Envisaged Crime Risks*

Transfer of the increased internal costs to final consumers may increase retail prices, thereby boosting the ITTP.

### *Crime Risks Probability*

IMPOSSIBLE TO DETERMINE – The key issue concerns costs. Since the European Commission will determine technical standards for the security features through delegated acts, it is not possible to quantify the additional costs. The sole estimate available refers to the costs of applying holograms on all cigarette packages. These costs would amount to approximately €150 million, which may be balanced by a 10% reduction of counterfeiting in five years (European Commission, 2012a, p. 110). Security features may indubitably contribute to the reduction of counterfeiting. Nevertheless, there is still a lack of scientific evidence and clarity on the type of security features to be adopted.

## Which EU Tracking & Tracing System?

In its accompanying impact assessment, the European Commission acknowledged that traceability may be burdensome, especially for small companies, but it also recognised that “there are possibilities to benefit from existing experience” by adopting PMI’s tracking and tracing software, if PMI system is compatible with international obligations (European Commission, 2012a, p.108).

In this regard, concerns have been raised (Colledge III, 2012; Joossens and Gilmore, 2013) about the Codentify initiative promoted by PMI together with Imperial Tobacco, BAT and Japan Tobacco. Codentify has been sponsored by the four major tobacco manufactures through the new Digital Coding and Tracking Association (DCTA) as an effective and cost-saving tool for tracking and tracing (Codentify, 2012). The DCTA signed an agreement with INTERPOL against illicit trafficking to promote Codentify worldwide. Technically, and on the basis of the limited information available, a study has indicated some pitfalls in Codentify, especially in regard to digital tax verification (Joossens and Gilmore, 2013).

The Proposed Directive appeared to be open, under certain conditions, to cooperation between the European Commission and tobacco companies.<sup>4</sup> However, the Environment, Public Health and Food Safety Committee (2013) amended the TPD proposal suggesting a different approach which excludes any possibility of cooperation<sup>5</sup> and which may imply greater implementation costs for tobacco manufacturers.

Transcrime welcomes the adoption of an EU tracking and tracing system as an effective tool in tackling counterfeiting and contraband. To avert the risks of ITTP growth, it recommends that, **the costs of implementation are not transferred to the consumers**. Otherwise, the price growth may generate a twofold scenario: 1) a reduction of consumption (fewer or no cigarettes) for those smokers who cannot afford the price increases; and 2) a displacement of consumption from the legal market to the illegal one for smokers who do not want to reduce their consumption.

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4. It stated (Art. 14 Par.6) that “Member States shall ensure that manufacturers and importers of tobacco products conclude data storage contracts with an independent third party, which shall host the data storage facility [...] The suitability of the third party, in particular its independence and technical capacities, as well as the contract, shall be approved and monitored by an external auditor, who is proposed and paid by the tobacco manufacturers and approved by the Commission”.

5. The new Art. 14 Par.3a argues that “The technology used for tracking and tracing should belong to and be operated by economic entities without any legal or commercial link to the tobacco industry”. The amendment to Art 14 Par.6 states that “the independent third party shall be free from commercial and other vested interests of the tobacco industry and other related industries. The suitability of the third party, in particular its independence and technical capacities, as well as the contract, shall be approved and monitored by the Commission, assisted by an independent external auditor, who is proposed and paid by the tobacco manufacturer and approved by the Commission”.

## Cross-border Distance Sales

### Art. 16 Notification of the Member States where the company has its headquarters and where it intends to sell

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#### **Envisaged Crime Risks**

Transfer of the increased internal costs to final consumer may increase retail prices, which may boost the ITTP.

#### **Crime Risks Probability**

LOW – The percentage of European tobacco e-buyers appears to be very small (from 0% to 1%) and problems already exist in enforcing the current TPD on internet sales (European Commission, 2012a). On the contrary, the proposal may reduce criminal opportunities in the internet market, which is associated with tax evasion, by authorising only registered companies.

### Art. 16 Mandatory age verification system

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#### **Envisaged Crime Risks**

Transfer of the increased internal costs to final consumers may increase retail prices, thereby boosting the ITTP.

#### **Crime Risks Probability**

LOW – The percentage of European tobacco e-buyers appears to be very small (from 0% to 1%) and problems already exist in enforcing the current TPD on internet sales (European Commission, 2012a). On the contrary, the proposal may reduce criminal opportunities in the internet market, which is associated with under-age purchasing.

## Novel Tobacco Products, Nicotine Containing Products, Herbal products

### Art. 17 Duty of notification, Stricter ingredient and labelling regulation for novel tobacco products

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#### **Envisaged Crime Risks**

Novel tobacco products should comply with duty of notification and with the same limits imposed for ingredients and labelling regulation. This could prevent tobacco manufacturers from releasing in Europe new tobacco products which could be counterfeit and/or smuggled from outside EU.

#### **Crime Risks Probability**

LOW – The probability of these behaviours occurring appears to be scarce, at least in the short-run. In fact, advertising limitations on tobacco products seem to prevent from successfully launching new products on a large scale in a relatively short time.

### Art. 18 Subject NCP above a certain nicotine threshold to the medicinal products legislation and the remaining NCP to labelling requirements

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#### **Envisaged Crime Risks**

Products above a certain nicotine threshold, which would require medical authorisation, may be excluded from the legal market and therefore favour the growth of an ITTP market for NCP.

#### **Crime Risks Probability**

IMPOSSIBLE TO DETERMINE – NCP (in particular e-cigarettes) represent an emerging and fluid market, not yet regulated by strict rules, which grew out of the anti-smoking legislation. The existence of an illicit market seems to emerge from some police operations carried out in Italy which seized – in the first part of 2013 - more than 11 thousand of e-cig kits and 692 refillors which did not report, fully or partially, the required labels (La Stampa, 2013). The growth of ITTP crime risks will depend also on how many NCP products are authorised. In the meantime, several European governments decided to take action against the e-cig (see for example Briggs, 2013; Sparks, 2013). For all those reasons and owing to the absence of information, it is currently impossible to determine the level of ITTP NCP risks created by the proposed directive.

### Art. 19 Health warnings on herbal products

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#### **Envisaged Crime Risks**

Transfer of the increased labelling production costs to final consumer may increase retail prices, thereby boosting the ITTP in some Member States.

#### **Crime Risks Probability**

LOW – The probability of these behaviours occurring appears limited since the labelling cost is low.

### 3.3 Results of the Preliminary Crime Risk Assessment

The results of the preliminary crime risk assessment (PCRA) highlighted (Table 8):

- a high risk that banning menthol cigarettes may increase ITTP crimes;
- a high risk that banning slim cigarettes may increase ITTP crimes.

While some of the new measures have a low ITTP Crime Risks Probability, the PCRA did not determine the ITTP Crime Risks Probability for other provisions since there is still a lack of scientific evidence and/or a lack of clarity on the implementation of the measures through delegated acts.

**Table 8. Results of the Preliminary Crime Risk Assessment**

	Illicit Trade in Tobacco Products (ITTP) Crime Risks Probability		
	High	Low	Impossible to determine
Art. 5 Mandatory Reporting in harmonised format		■	
Art. 6 Ban on characterizing flavours, including menthol	■ Menthol	■ Candy & Fruity flavours	
Art. 9 Mandatory enlarged picture warnings		■ Increasing of retail prices	■ Standardisation and brand loyalty
Art. 11 Imposing stricter labeling regulation for smokeless tobacco products		■	
Art. 12 Ban of misleading colours, symbols and slim FMC	■ Slim		■ Others
Art. 14 EU tracking and tracing system and security features			■
Art. 16 Cross-Border distance sale		■	
Art. 17 Novel tobacco products		■	
Art. 18 Nicotine Containing Products			■
Art. 19 Herbal Products		■	

# Chapter 4

## *Extended Crime Risk Assessment*

The PCRA selected the banning of menthol FMC and slim FMC as having a high probability of creating unintended crime opportunities in the tobacco market. In order to assess the likely impact on crime, perpetrators, victims and costs, a collateral study has been carried out (see APPENDIX). Since both policy options adopt the same measure (ban) which can produce similar effects (eliminating the availability of menthol and slim FMC), the extended crime risk assessment will be carried out jointly.

### 4.1 Ban on Menthol and Slim Cigarettes

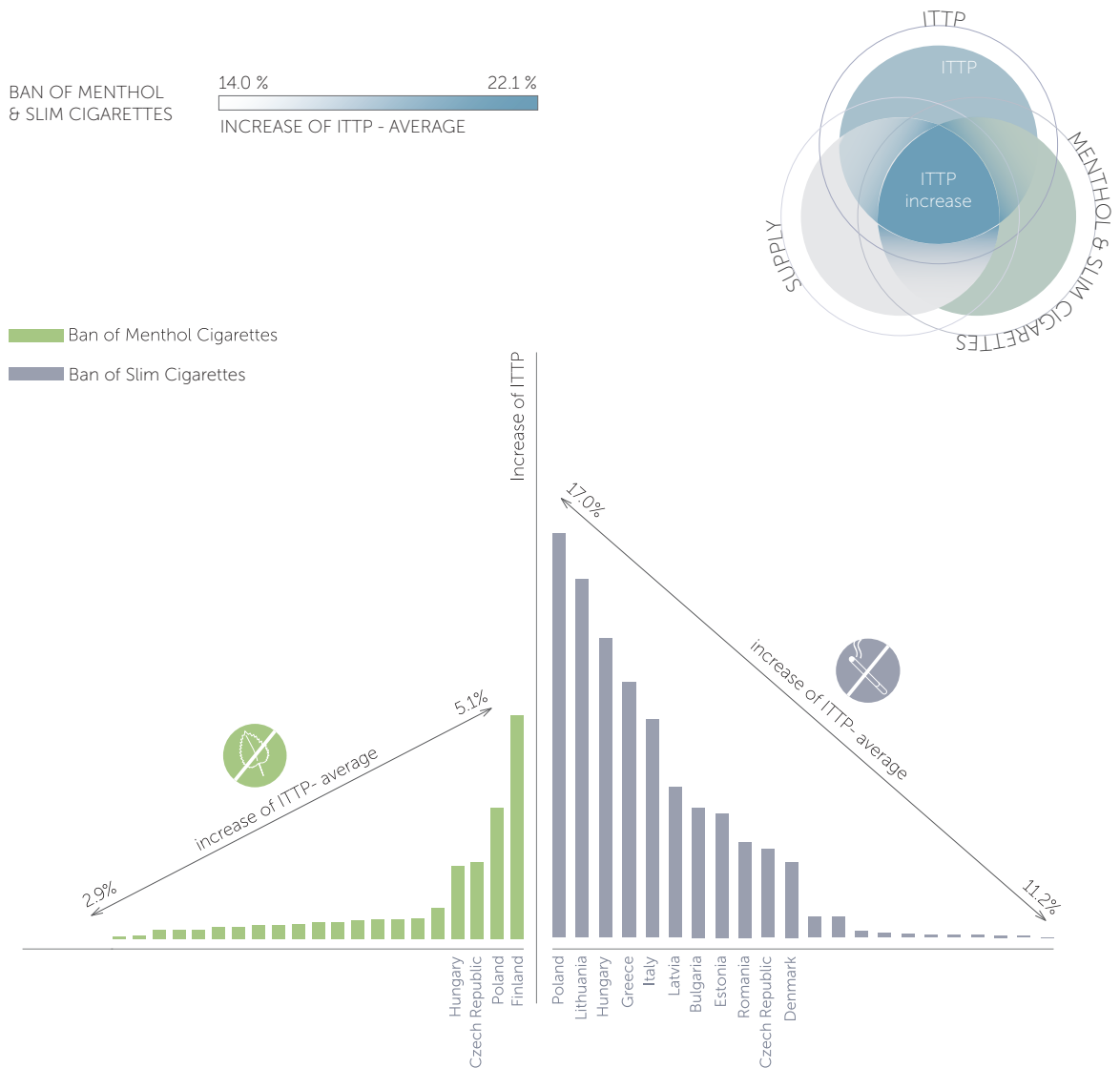
Globally, no country has adopted a ban on slim cigarettes. As regards menthol cigarettes, only Brazil has banned all flavours and additives in tobacco products (Framework Convention Alliance, 2012), but the impact of this decision on ITTP is still unknown because the Brazilian entered into force in September 2013. On the other hand, the United States initially considered banning menthol FMC, but then discarded this option. According to the U.S. Government, “the sudden withdrawal from the market of products to which so many millions of people are addicted would be dangerous. First, there could be significant health risks to many of these individuals. Second, it is possible that our health care system would be overwhelmed by treatment demands [...]. Third, the agency also believes that, given the strength of the addiction and the resulting difficulty of quitting tobacco use, a black market and smuggling would develop to supply smokers with these products. It also seems likely that any black market products would be even more dangerous than those currently marketed, in that they could contain even higher levels of tar, nicotine, and toxic additives” (United States Trade Representative, 2010, p.7).

Consequently, there is no information and data available on the actual impact on the ITTP of banning menthol and/or slim cigarettes. The assessment is therefore based on the study presented here (see APPENDIX), and on general criminological assumptions about the likely evolution of crime, perpetrators, victims (e.g. tobacco growers, tobacco manufactures, tobacco retailers, tobacco consumers) and costs.

## 4.1.1 Crime

### Will the amount of risk vary?

The ITTP risk is likely to increase especially in those countries where menthol and slim cigarettes are highly popular. There is evidence that a proportion of menthol and slim consumers would move to the ITTP, since there would be no alternative. The growing demand for menthol and slim cigarettes would generate an illicit supply of menthol and slim FMC. Our study finds that the increase in the level of the ITTP could range **between 2.86% and 5.14% as consequence of the ban on menthol cigarettes**, and between 11.15% and 16.95% because of the ban on slim cigarettes. Therefore **the total increase would be between 14.0% and 22.1%**. Apparently, the most affected countries would be those close to the Eastern EU border, where the ITTP is already flourishing (European Commission, 2011; OLAF, 2012c; EurActiv.com, 2013). Our study shows that if the bans on menthol and slim cigarettes were adopted, 12 out of 28 EU Member States would be seriously affected by growth of the ITTP. The significant ITTP growth across Eastern EU borders may jeopardise the efforts made by the European Commission to counter the phenomenon (European Commission, 2011).





## How will the risk of detection while engaging in the ITTP vary?

The probable increase in the levels of ITTP as a reaction to the banning of menthol and slim FMC is likely to impact on risk of detection. EU seizures of tobacco products have been relatively stable since 2005, and amount to approximately 7-8% of the estimated illicit market (OLAF, 2012c). **According to our estimates, the banning of menthol and slim cigarettes would generate between 8.2 and 17.8 billion extra illicit cigarettes per year.** This means that, without an increase in law enforcement resources and capacities, it is less likely that EU seizures will grow further, and it is more likely that the incidence of **EU seizures over the estimated illicit market will decline to 5-6%**. In an overall context of budgetary constraints, it is difficult to envisage an increase in law enforcement resources to prevent and police the ITTP. EU Member States will be unable to tackle the increased risks of growth by the ITTP with a comparable increase in law enforcement. The ITTP's growth will be concentrated along the Eastern EU border, which may generate further problems in terms of corruption of border police and customs officers (European Commission, 2011). As result, the risk of detection for criminals would decline.

## How will the expected profits for the perpetrators of the ITTP vary?

The tobacco market has a dual nature because it consists of a legitimate and an illegitimate part. The banning of menthol and slim cigarettes would remove only the legitimate supply. Profits for illicit traders would increase as result of a monopolistic position which would enable them to determine prices without considering the legal benchmarks. According to our study, the **yearly expected extra profits can be estimated at between €0.4 and €1.3 billion.**

Consequently, the envisaged bans are likely significantly to increase the ITTP's expected profits, as a result of higher returns on both menthol and slim cigarettes.

### 4.1.2 Perpetrators

#### Will the number of perpetrators vary?

Increased levels of the ITTP are likely to create new opportunities for involvement in it. The overall number of people actively involved in the trade would probably increase. According to the available data, it is not possible to provide a clear estimation of the growth.

#### How will the complexity of the organisational structure of ITTP vary?

In the case of menthol FMC, it appears that the envisaged ban would have a low impact on the complexity of the organisational structure required to engage in the ITTP, since the manufacturing of menthol cigarettes is similar to that of non-mentholated cigarettes and does not require any special equipment. As already pointed out, "menthol may be added at any of the following stages; spraying onto the final blend, through addition to the filter via a thread, or by application to the cigarette paper or the foil used to wrap the cigarettes" (European Commission, 2012b, p.15).

In the case of slim FMC, it appears that the envisaged ban would have a limited impact on the complexity of the organisational structure required to engage in the ITTP, since the manufacturing of slim cigarettes requires minimal technical adaptations to the standard tobacco machineries. Indeed, criminal investigations have already proved that ITTP perpetrators are already engaged in the market (Ahec, 2012).



## How will the individual skills/knowledge required for the ITTP vary?

It appears that the envisaged bans would have a limited impact on the individual skills required to engage in the ITTP, since the manufacturing of menthol FMC is similar to that of non-mentholated cigarettes, and manufacturing slim FMC requires minimal technical adaptation to the standard tobacco machinery.

### 4.1.3 Victims

#### Will the number of victims vary?

The risk of increased levels of ITTP implies that the number of consumers of illicit tobacco products may increase. The only studies available on consumers' attitudes to the banning of slim (in Romania) and menthol (in Poland and in Finland) FMC revealed a similar pattern, although with some limitations<sup>6</sup> (SKIM, 2013a; SKIM, 2013b). If the bans were approved, 42% of slim and between 51% (Poland) and 75% (Finland) of menthol consumers would buy their products on the illicit market. In the case of menthol cigarettes alone, this would mean that approximately 10% of Polish consumers would move to the illicit market. Moreover, legitimate market operators, especially the retail sector, are likely to be seriously damaged by the availability of illicit products, which cannot be sold in the legal market.

#### How will the socio-demographic characteristics of victims-consumers vary?

Logically, menthol and slim FMC consumers will be most affected by the bans. Unfortunately, there are no available studies on the socio-demographic characteristics of European menthol and slim cigarette smokers. Therefore, owing to the lack of available studies in the field, it is currently impossible to determine how the characteristics of victims would vary.

#### Will the amount of victims/legal persons vary?

As already mentioned, upstream and downstream distributors may be affected by the increase in ITTP as consequence of the menthol and slim ban, since a part of their income may be transferred to illicit suppliers. As already noted, the increase would not be the same in all the EU countries, so that a significant impact is expected only where menthol and slim FMCs are popular.

6. In both studies, the experiments gave only the alternative between buying licit or illicit slim/menthol cigarettes. They did not consider the hypothesis that a ban would induce some consumers to quit smoking.

## 4.1.4 Costs/Harms

### Will the total cost of the crime vary?

Surprisingly, only one study has focused also on the impact that menthol and slim bans may have on the illicit side of the tobacco market (Roland Berger, 2013). This study argues that a combination of menthol and slim bans together with the pack standardisation measures may generate high job losses (from 70,000 to 175,000) and a strong drop in tax revenue (from €2.2bn to €5.0bn). Moreover, the study foresees a strong increase in illicit trade (25-55%) which would entail higher costs for law enforcement staff and a decrease in the expected contraction in smoking prevalence, as well as an increase in the health risks for smokers because counterfeit cigarettes are more dangerous (Levinson, 2011). Our accompanying study, focusing on the ban of menthol and slim FMC, argues that it seems likely that, at least in the short-medium term, the levels of the ITTP will significantly rise in several European countries to meet the increased demand for menthol and slim tobacco products. **It estimates that EU MSs may lose tax revenues amounting to between €1.082 and €2.259 billion per year due to the illicit sales of menthol and slim FMC.**

### How will private costs for victims vary?

As already mentioned, some illicit products, such as 'illicit whites' and counterfeits, have been frequently reported as being significantly more dangerous to smokers' health (Center for Regulatory Effectiveness, 2011; Levinson, 2011). Therefore, the banning of menthol and slim FMC may generate higher health costs. In addition, the increased ITTP may significantly affect legitimate tobacco growers (Polskie Radio, 2013), tobacco manufacturers, and the retail sector, with the risk of lower revenues, loss of employment and reduced fiscal revenues.

### How will social costs vary?

The actual impact on social costs of the menthol and slim ban will depend on the actual increase in the ITTP. According to the Roland Berger study (2013), which also accounts for packaging standardisation, ITTP will increase by 25-55%, so that social costs will be remarkable in terms of job losses and lost tax revenues. **Our study estimates that a menthol and slim ban may seriously impact on the European legitimate tobacco market with an ITTP growth by 14-22%.** In particular, the social costs will not be homogeneously distributed. Eastern countries and Poland in particular, will suffer disproportionate costs compared with those of the other EU Member States.

## 4.2 Results of the Extended Crime Risk Assessment

The ECRA on the banning of menthol and slim FMC was supported by a collateral study (see APPENDIX). Notwithstanding data and studies limitations, the assessment on menthol and slim bans suggested that:

- a ban on menthol cigarettes may increase the level of the ITTP in Europe by between 2.9% and 5.1%;
- a ban on slim cigarettes may increase the level of the ITTP in Europe by between 11.2% and 17.0%;
- in Europe, the total ITTP increase may be between 14.0% and 22.1%;
- the yearly expected extra profits for ITTP perpetrators could be estimated at between €0.4 and €1.3 billion (for both menthol and slim cigarettes);
- EU MSs may lose yearly tax revenues amounting to between €1.1 and €2.3 billion due to the illicit sales of menthol and slim FMC;
- the social costs of ITTP crime would not be homogeneously distributed. Eastern countries and Poland in particular, would suffer disproportionate costs compared with those of other EU Member States. This would not lead to improved equality among Member States.

# Chapter 5

## *Conclusion*

The study confirmed the necessity to make the EU policy-makers and the public aware about ITTP crime.

Indeed, although the EU tobacco market is extremely vulnerable to the ITTP, and although our previous study clearly indicated ITTP crime risks, the European Commission did not consider such risks to be unintended consequences of TPD regulation. This lack of consideration highlights problems in compliance with the methodology guidelines recommended for the EU impact assessment. In the end, the entire impact assessment process may lose reliability because it did not consider the dual nature (licit and illicit) of the tobacco market. Today, the ITTP in Europe accounts for 11.1% of the overall market (KPMG, 2013) and policy-makers should be aware that any decision taken to regulate the legitimate market can positively/negatively affect the illegitimate one.

Fortunately, the revision of TPD also contains improvements to the current regulation. Specifically, intervening on cross-border distance sales may reduce opportunities for ITTP crimes.

In addition the provisions for an EU traceability system and for security features could further strengthen the prevention of ITTP crimes, although their level of effectiveness is still uncertain and it will depend on the delegated acts which have to be taken by the European Commission.

However, the crime proofing exercise conducted showed that bans on menthol and slim cigarettes carry significant risks of creating unintended opportunities for the illicit trade in tobacco products. The effects of a sudden ban and its impact on ITTP crime could be serious, especially in those EU countries where the banned tobacco products are popular. This would not lead to improved equality among Member States.

The crime proofing exercise also suggests that the impact on crime levels of some of the policies foreseen requires further and more detailed analyses. In one year, some progress has been made, but there is still a need for studies and better data to increase knowledge about the ITTP.



# APPENDIX

## *Do the Menthol & Slim Bans affect the ITTP? An exploratory study*

### Introduction

The purpose of this study is to provide quantitative estimates of the possible impacts on the ITTP of a ban on menthol and slim cigarettes.

This analysis is organised into three sections:

- section one evaluates the increase in the ITTP due to the ban on menthol tobacco products;
- section two evaluates the increase in the ITTP due to the ban on slim cigarettes;
- section three evaluates the joint effects of the two bans on the total level of the ITTP in the EU, on national tax revenues, and on the earnings of smugglers.

Each section presents further partitions, each of which corresponds to a different research question. In fact, because of the substantial lack of readily available data, a series of intermediate estimates have been necessary.

The data used for this study are drawn from KMPG and Euromonitor International data, Choice-Based Conjoint analyses commissioned by the tobacco industry, European Commission surveys and data, empty pack surveys commissioned by the tobacco industry and media news reports.

# PART 1

## *Ban on menthol cigarettes*

### 1.1 Estimate of the impact of banning menthol cigarettes on the level of the ITTP

The purpose of the analysis is to **provide a quantitative estimate of the change, if any, in the level of the ITTP in EU Member States due to the removal of menthol cigarettes from the EU legal tobacco market.**

In general, estimation of the magnitude of tobacco smuggling is complex because of its hidden and illegal nature (Merriman, Yurekli, & Chaloupka, 2000; Ciecierski, 2007; WHO, 2009; Luk Joossens & Raw, 2012). Estimating future variations in the level of the ITTP in response to the change of the legislative framework adds further difficulties.

The substantial **shortage of data and information** concerning the attitudes of consumers towards illicit tobacco products has been the main challenge in conduct of the analysis. This underlines the need to investigate the various components of the ITTP with quantitative and systematic approaches.

### 1.2 Methodology

Analysing the impact of the ban on the consumption of illicit tobacco products is possible only after the estimation of several intermediate data. Each datum may be seen as the answer to a specific question:

- *What is the level of penetration of the ITTP in the EU Member States?* – The estimation of the level of the ITTP allows comparison between pre and post ban levels and assessment of the impact of the ban itself.
- *What is the share of menthol cigarettes within the illicit markets?* – The influence of the ban on the ITTP would concentrate on the menthol segment of the illicit market.
- *How would the ban change the demand for illicit menthol cigarettes?* – A key step in the analysis is to understand how smokers would react to the ban.
- *To what extent could the illicit supply satisfy the increased demand for menthol products?* – The possible increase in the illicit consumption would depend on the capacity of the supply to satisfy the increasing demand.

Once these data have been collected and estimated, it is possible to answer the main research question:

- *What is the variation in the level of the ITTP due to the ban of menthol tobacco products?*

**This procedure yields appraisals of the variation in the level of the ITTP and of the relative weight of illicit menthol cigarettes within each national tobacco black market.**

## 1.2.1 What is the level of penetration of the ITTP in the EU Member States?

There is a lack of official, international estimates of the level of the ITTP.

**Evaluating the current penetration level of the ITTP in each tobacco market** is the first step in estimating the impact of banning menthol tobacco products on the ITTP in the EU Member States. The initial level of the ITTP is crucial for evaluating the eventual change due to the ban.

Official European dataset would be the favourite source to evaluate the level of the ITTP. However, there is no international agency providing these data. Another possible solution would be to collect the data from official national sources, but official data on the ITTP are often lacking and uneven across countries.

This is due to four main reasons:

- estimating the magnitude of the ITTP is difficult because of its hidden and illegal nature (Merriman, 2002; Joossens, 2011);
- law enforcement agencies tend not to publicise the scope of their activities for security and effectiveness reasons (Merriman, 2002; Joossens, 2011);
- there is insufficient intersectorial cooperation (Lieberman, Blecher, Carbajales, & Burke, 2011);
- different methods to evaluate the levels of the ITTP are available, but all of them have their limitations, and the data obtained using different techniques are not immediately comparable. Moreover, studies often provide limited information on the methodology used, which limits the robustness of the analysis (Merriman, 2002; Joossens, 2011, p.1).<sup>7</sup>

The methods most commonly used to measure the illicit trade are:

- observation of the producers and requests to experts for smuggling data;
- comparison of tax-paid sales and individually reported consumption measures;
- survey on the purchasing behaviours of tobacco users;
- observational data collection (e.g. empty pack surveys).<sup>8</sup>

7. For a discussion on the methods available to evaluate the level of ITTP see "Illicit tobacco trade in Europe: issues and solutions" (Joossens, 2011) and "From cigarette smuggling to illicit tobacco trade" (Joossens and Raw, 2012).

8. EPSs give estimations of the penetration of the illicit market and of its evolution over time. There are several reasons for treating EPSs with caution:

- they assess non-domestic products, which include legitimately purchased cigarettes (e.g. by travellers);
- figures are based on packs of cigarettes and exclude other products such as HRT or cigars;
- they do not identify domestic contraband cigarettes;
- the sample is collected at the street level and does not consider homes and workplaces.

Notwithstanding these limitations, EPSs may provide data useful for analysing the illicit cigarettes market and in particular its variations over time. Moreover, since 2012 they provide estimates by product characteristics, which are hardly available from other sources.

## Increase the knowledge, improve the research

European institutions like the OLAF should provide official estimates of the level of the ITTP in the EU area.

Reliable quantitative measures of tobacco smuggling can enhance effective control policies. Measurements can provide benchmarks to ensure the implementation, review, and improvement of such policies. Sound measurements of the association between changes in tobacco control policies and changes in smuggling can demonstrate the success of these policies (Merriman, 2002, p.1).

## Private market analysts provide estimates of the ITTP

Given the above-mentioned difficulties and shortages of official data, it has been decided to use the analyses conducted by private market analysts. In particular, the studies used are those conducted by Euromonitor International and by KPMG.

Estimates by Euromonitor International draw on different sources, including trade press, customs offices, interviews with manufacturers and retailers, as well as local knowledge of the markets – for example, how porous borders are, how high unit prices are, whether a market is a conduit for cigarettes versus actual consumption.

Euromonitor International adopts the same techniques for all the countries analysed (Cyprus, Luxembourg, Malta are not included in the dataset) allowing cross-country and cross time comparisons. The cross-country homogeneity of the estimation method makes it possible to treat all the data in the same way without having to compute an ad hoc calculus for any market.

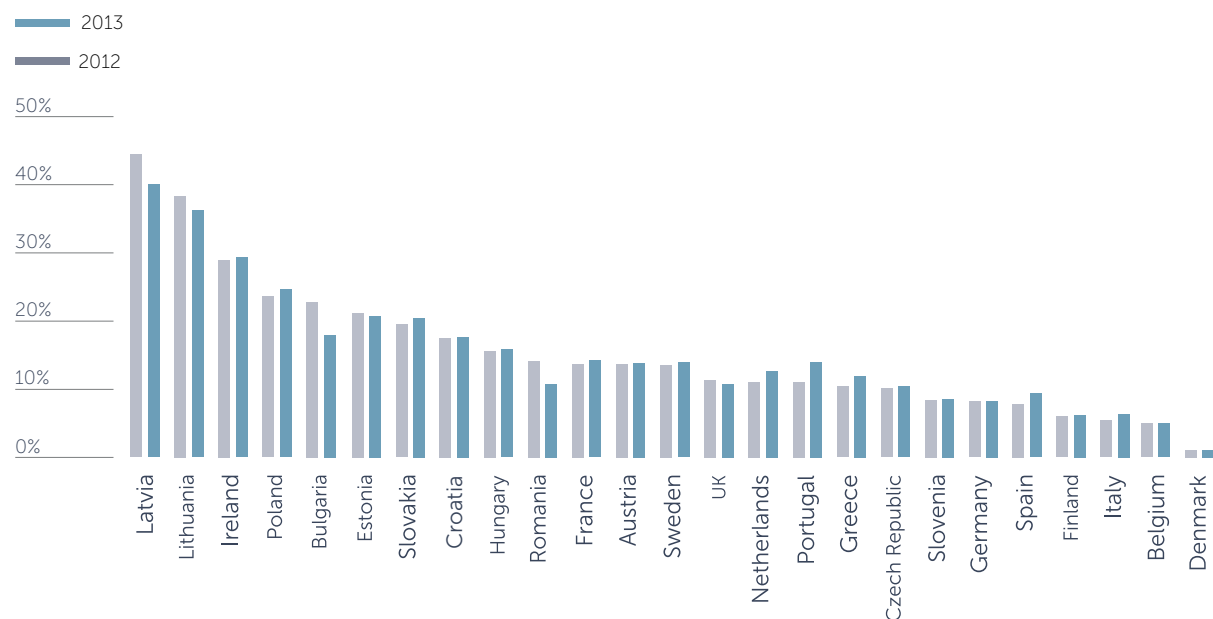
In addition to estimates for the period 2000-2012, Euromonitor International provides forecasts of the levels of the ITTP for the period 2013-2017. Since the purpose of the analyses is also to evaluate the future impact of the ban, this is an added value.

Euromonitor International estimates that most EU countries will have an ITTP level of between 5.0% and 15.0%. The level of the ITTP is higher in Eastern Europe and in Ireland (Figure a.1) (Euromonitor International, 2013b).

**Figure a.1. Estimated levels of the ITTP in 2012 and in 2013**

Source: Transcrime elaboration on Euromonitor International (2013b) data

Note: Euromonitor International's dataset does not include Cyprus, Luxembourg, Malta. 2013 data are forecasts.





The results of Project Star by KPMG are used to compute intermediate estimates, to check the results, and to construct a range of variation of the possible increase in the level of the ITTP.

KPMG conducts an annual study for PMI and OLAF as part of the EU agreements. KPMG analyses numerous different sources, including tobacco sales data, consumer surveys and EPSs, and it divides non-domestic packs between:

- legal non-domestic;<sup>9</sup>
- counterfeit and contraband (c&c).

The share of packs classified as c&c provides an estimate of the ITTP's penetration (KPMG, 2013).

## 1.2.2 What is the share of menthol cigarettes within the illicit markets?

**There are no available estimates of the share of illicit menthol cigarettes**

Once the level of the ITTP in a given market has been estimated, the next step in analysis of the impact of the ban is **to determine the weight of the traffic of illicit menthol cigarettes within the black market**. Given the preference of menthol tobacco smokers for menthol products, the ban is likely to affect specifically this segment of the ITTP (O'Connor et al., 2012, p.1331; Roland Berger, 2013, p.14). It follows that knowing the size of this segment is significant.

The ideal solution for evaluating of the size of national black markets would be to exploit international official sources. However, to date, **neither official nor unofficial figures on the size of the illicit menthol cigarette market in the EU are available**.

The tobacco market is highly differentiated and can be broken down into several categories. One categorisation is based on specific taste (Roland Berger, 2013, p.4).

Disentangling the various subcategories of the ITTP is an extremely challenging task. Most of the available sources on the ITTP – seizures for example – do not catalogue the characteristics of the products, such as the flavour or the packaging.

### ***Increase the knowledge, improve the research***

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Analyses of the ITTP should provide data on the various products available on the black market.

Categorisation is important when analysing the market, market-specific consumer preferences, and the potential impact of regulations (Roland Berger, 2013, p.5).

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9. Legal non-domestic – products brought into the market legally by consumers, for instance after cross-border trips (KPMG, 2013, p.3).

## The share of menthol cigarettes in the illicit market is different from their share in the licit market, and it varies across countries

Assuming the attitude of menthol consumers toward the black market to be equal to the attitude of the consumers of any other tobacco product may be a remedy for the above-mentioned lack of data. It would follow from this assumption that the share of menthol cigarettes in the illicit market is equal to their share in the legal market.<sup>10</sup> Data on the share of menthol cigarettes in each tobacco market are easily available (Table a.1).

**Table a.1. Share of menthol cigarettes as % of the total market – LM<sub>j</sub>**

Source: Euromonitor International (2013) data

Note: Euromonitor International's dataset does not include Cyprus, Luxembourg, Malta.

Data for the period 2013-2017 are forecasts.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Austria</b>	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6
<b>Belgium</b>	4.5	4.2	4.2	4.0	3.9	3.8	3.6	3.8	3.8	4.0	4.2
<b>Bulgaria</b>	2.0	1.7	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3
<b>Croatia</b>	1.4	1.5	1.4	1.5	1.4	1.5	1.6	1.7	1.8	1.9	2.0
<b>Czech Republic</b>	4.5	4.7	5.2	5.6	5.8	6.0	6.3	6.5	6.7	6.9	7.0
<b>Denmark</b>	6.4	6.3	6.2	6.1	6.1	6.0	6.0	5.9	5.9	5.9	5.9
<b>Estonia</b>	6.6	7.0	8.0	8.1	8.2	8.3	8.4	8.5	8.5	8.4	8.3
<b>Finland</b>	21.3	22.0	22.0	22.5	23.1	23.9	24.2	25.0	25.5	25.8	26.1
<b>France</b>	3.5	3.5	3.7	3.8	3.9	3.9	3.9	3.9	4.0	4.0	4.1
<b>Germany</b>	1.8	1.8	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.3	2.3
<b>Greece</b>	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
<b>Hungary</b>	6.0	6.2	6.3	6.4	6.2	6.0	6.0	5.8	2.0	0.1	0.1
<b>Ireland</b>	1.7	2.0	2.0	2.1	2.2	2.3	2.3	2.5	2.5	2.4	2.2
<b>Italy</b>	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
<b>Latvia</b>	1.9	2.0	2.1	2.1	2.1	2.3	2.4	2.5	2.7	2.7	2.7
<b>Lithuania</b>	3.5	4.0	5.8	6.0	6.1	6.4	6.6	6.7	6.8	7.0	7.1
<b>Netherlands</b>	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5	0.0	0.0	0.0
<b>Poland</b>	15.5	16.5	17.0	18.0	19.0	19.5	19.5	19.5	20.0	20.0	20.5
<b>Portugal</b>	5.2	5.3	5.3	5.3	5.4	5.6	5.8	5.8	5.9	5.9	6.0
<b>Romania</b>	8.5	6.1	6.0	5.7	5.5	5.0	5.0	5.0	5.0	5.0	5.0
<b>Slovakia</b>	11.0	11.0	11.1	11.3	11.3	11.4	6.8	0.0	0.0	0.0	0.0
<b>Slovenia</b>	1.8	1.8	1.8	1.8	1.8	2.0	2.1	2.0	1.9	1.9	1.8
<b>Spain</b>	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
<b>Sweden</b>	9.5	9.0	8.9	8.9	8.8	8.8	8.7	8.6	8.6	8.6	8.6
<b>UK</b>	6.9	6.9	7.2	7.3	7.6	8.2	8.4	8.6	8.3	7.8	6.5

Nonetheless, the results of the empty pack surveys conducted in 2012 indicate that attitudes to the non-domestic supply of menthol cigarettes and of other cigarettes are different.<sup>11</sup> In most countries, consumers of menthol cigarettes purchase fewer non-domestic cigarettes than consumers of other cigarettes do (GSPR, 2013). This consideration on non-domestic consumption can be roughly extended to illicit consumption. It follows that assuming that menthol tobacco products have the same shares in the licit and the illicit market is over-simplistic and has to be adjusted.

10. KPMG adopts a similar approach to evaluating the share of non-domestic menthol cigarettes within the German market because separate menthol and slim EPS data are not available for Germany (KPMG, 2013, p.30).

11. Non-domestic product – products not originally intended for the market in which they are consumed (KPMG, 2013, p.3).

## Data on non-domestic menthol cigarettes allow estimation of the share of illicit menthol cigarettes

The availability of data on:

- the national level of the ITTP – Euromonitor International and KPMG;
- the share of menthol cigarettes in the tobacco market – Euromonitor International;
- non-domestic cigarettes – KPMG;
- the share of menthol cigarettes among non-domestic cigarettes – KPMG.

Allows more precise estimates of the penetration of menthol cigarettes in national black markets.

The key step is the **identification of a parameter  $\alpha_j$  expressing the propensity of menthol cigarette consumers to purchase illicit cigarettes with respect to the consumers of all tobacco products regardless of their specific flavour in country  $j$ .** The share of menthol in the illegal market in a given country ( $IM_j$ ) is estimated as the products of the parameter  $\alpha_j$  and of the share of menthol in the legal market ( $LM_j$ ),  **$IM_j = \alpha_j * LM_j$ .**

The data used to calculate  $\alpha_j$  are the shares of non-domestic menthol cigarettes in the total of menthol cigarettes in the  $j$  market. It is then necessary to determine which part of these cigarettes is illicit and which is non-domestic but legal. The available data report the share of total legal non-domestic  $ND(L)$  in the entire market without separating menthol and non-menthol cigarettes. Then, to obtain  $\alpha_j$  it is necessary to assume that the share of legal non-domestic among menthol cigarettes is equal to the overall share of legal non-domestic cigarettes.

Accepting this simplification, it follows that

$$M_j = ND(T)_{men} * \frac{ITTP}{ITTP + ND(L)}$$

where:

$M$	is the share of illicit menthol cigarettes in the total consumption of menthol cigarettes
$ND(T)_{men}$	is the share of total non-domestic menthol cigarettes in the total consumption of menthol cigarettes
$ITTP$	represents the level of penetration of the ITTP in the given country
$ND(L)$	represents the penetration of legal non-domestic cigarettes in the given country

Once  $M$  has been calculated  **$\alpha = M/C$** . It is now possible to adjust the Euromonitor International data on the level of consumption of menthol cigarettes ( $LM_j$ ) (Table a.1, p.32) to obtain the share of menthol cigarettes in the total illicit market ( $IM_j$ ) (Table a.2, p.34). As said,  **$IM_j = \alpha_j * LM_j$ .**

If  $0 < \alpha < 1$ , then consumers of menthol products have a propensity to purchase illicit tobacco products lower than that of tobacco consumers in general. Conversely, if  $\alpha > 1$ , consumers of menthol products tend to purchase illicit products more than other smokers do.

Since the division of empty packs according to cigarette features such as flavour and diameter began in 2012, each country has its own  $\alpha$ , but this value does not change year by year. In the next years, when more data are available, it will be possible to analyse the relations among the consumptions of different illicit tobacco products and evaluate their evolution.

**Table a.2. Share of menthol cigarettes as % of the illicit tobacco market – IM<sub>i</sub>**

Source: Transcrime elaboration on Euromonitor International (2013) and KPMG (2013) data

Note: KPMG reports a share of non-domestic menthol cigarettes equal to 0 in Portugal, Slovakia and Slovenia; therefore, the parameter  $\alpha$  in these countries is 0 as well. Croatia joined the EU on July 1<sup>st</sup> 2013. Project Star does not include any data concerning Croatia yet. Therefore, Croatia is not included in the analysis.

	$\alpha$	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Austria</b>	2.02	4.4	4.0	3.8	3.6	3.4	3.4	3.2	3.2	3.2	3.4	3.4	3.4	3.4	3.2	3.2	3.2	3.2
<b>Belgium</b>	1.10	7.0	6.6	6.2	5.7	5.5	5.4	5.2	5.0	4.6	4.6	4.4	4.3	4.2	4.0	4.2	4.2	4.4
<b>Bulgaria</b>	1.69	7.6	6.1	5.1	4.4	3.4	2.5	2.5	3.4	2.9	2.7	2.9	3.0	3.2	3.4	3.5	3.7	3.9
<b>Czech Republic</b>	0.61	2.8	2.7	2.6	2.5	2.4	2.5	2.7	2.7	2.8	3.2	3.4	3.5	3.6	3.8	3.9	4.1	4.2
<b>Denmark</b>	0.53	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1
<b>Estonia</b>	0.08	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7
<b>Finland</b>	0.52	8.9	9.9	10.1	10.4	10.4	10.7	11.0	11.1	11.5	11.5	11.7	12.1	12.5	12.6	13.0	13.3	13.5
<b>France</b>	1.38	4.4	4.4	4.4	4.4	4.5	4.5	4.7	4.8	4.8	5.1	5.2	5.4	5.4	5.4	5.4	5.5	5.5
<b>Germany</b>	0.99	2.5	2.0	1.7	1.6	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.3
<b>Greece</b>	2.28	2.5	2.7	3.0	3.4	3.6	3.0	2.5	2.5	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
<b>Hungary</b>	0.43	2.2	2.9	2.8	2.8	2.7	2.6	2.4	2.6	2.6	2.7	2.7	2.6	2.6	2.6	2.5	0.9	0.0
<b>Ireland</b>	0.78	1.1	1.5	1.7	1.9	1.9	1.6	1.5	1.3	1.6	1.6	1.6	1.7	1.8	1.8	1.9	1.9	1.9
<b>Italy</b>	1.58	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
<b>Latvia</b>	0.27	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7
<b>Lithuania</b>	0.12	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
<b>Netherlands</b>	1.50	9.7	9.3	9.0	8.7	8.2	7.9	7.8	7.8	7.6	7.5	7.3	7.2	7.0	6.9	6.7	0.0	0.0
<b>Poland</b>	0.35	2.2	2.6	3.0	3.3	3.9	4.2	4.8	5.4	5.8	5.9	6.3	6.6	6.8	6.8	6.8	7.0	7.0
<b>Portugal</b>	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Romania</b>	0.09	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Slovakia</b>	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Slovenia</b>	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Spain</b>	0.49	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
<b>Sweden</b>	0.14	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
<b>UK</b>	0.68	2.9	3.1	3.5	3.7	4.0	4.5	4.6	4.7	4.7	4.9	5.0	5.2	5.6	5.7	5.9	5.6	5.3

## 1.2.3 How would the ban change the demand for illicit menthol cigarettes?

**Understanding the reaction of menthol consumers to the ban is essential** for determining how the ban would affect the ITTP.

**The proposed ban on menthol cigarettes is unique in the European scenario** and there have been very few similar cases in the entire world.<sup>12</sup> Therefore, the observation of historical cases is not possible and there are no data on the past that can be used to produce estimates. In particular, it is not possible to apply the econometric approaches related to the exploitation of natural experiments.<sup>13</sup>

12. On June 22<sup>nd</sup> 2009, the president of the U.S. Barack Obama signed the *Family Smoking Prevention and Tobacco Control Act*. The Act bans certain types of flavoured tobacco including clove-flavoured cigarette (Kretek).

13. A "natural" or quasi-experiment has a source of randomisation that is "as if" randomly assigned, but this variation was not part of a conscious randomised treatment and control design. For a discussion of the topic see Natural experiments and quasi-natural experiments (Di Nardo, 2008) and *When Natural Experiments Are Neither Natural nor Experiments* (Sekhon & Titiunik, 2012).

Given the absence of any natural experiment, it is necessary to use data from experiments designed and implemented by researchers. Unfortunately, studies focused on Europe are extremely scarce. Only two **Choice-Based Conjoint experiments (CBCs) conducted in Poland and in Finland in 2013** have investigated this issue.<sup>14</sup> Therefore, the estimate of the consequence of the ban on the level of the ITTP is based on an appropriate projection of the Polish and Finnish results to the other countries.

### ***The studies on the ban in the United States***

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With respect to the United States, in recent years a number of studies have investigated the consumption of menthol cigarettes.<sup>15</sup> The researchers have also used quantitative techniques.<sup>16</sup> In particular, *An Inquiry into the Nature, Causes and Impacts of Contraband Cigarettes* (Center for Regulatory Effectiveness, 2011) and *What would menthol smokers do if menthol in cigarettes were banned?* Behavioral intentions and simulated demand (O'Connor et al., 2012) have also considered the impacts of a ban on menthol cigarettes on the black market. The first study estimates that if a menthol ban were imposed in the US, the contraband market for menthol cigarettes would increase by about 45% (Center for Regulatory Effectiveness, 2011). 24.1% of the respondents in a survey conducted by O'Connor et al. said that they would find a way to buy menthol brands (2012, p.1332).

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**CBCs assess the willingness of consumers of menthol smokers to purchase cigarettes from the black market if there were no legal supply of menthol cigarettes.**

In response to a ban, some menthol smokers might quit smoking entirely, others might switch to non-mentholated cigarettes or other types of tobacco or nicotine products unaffected by a ban, other may make use of self-mentholation products and still others might seek out illicit menthol cigarettes (O'Connor et al., 2012, p.1331).

Significantly, **respondents were forced to choose between legal and illegal tobacco products and could not choose to quit smoking** if no legal menthol cigarettes were available. They could choose between illicit menthol tobacco products and non-menthol tobacco products available from both legal retailers and illicit channels. However, it would be crucial to investigate also what proportion of consumers would not buy any tobacco product in the case of a menthol ban.

14. The Impact of a Menthol Ban on illicit trade in Poland (Coelho & Arink, 2013). Philip Morris International commissioned the study to SKIM consumer research.

15. See for example the special Issue of *Tobacco Control* May 2011, Volume 20, Suppl 2 *Menthol cigarettes*.

16. See for example *Menthol Brand Switching Among Adolescent and Young Adults in the National Youth Smoking Cessation Survey* (Villanti et al., 2012) or *What would menthol smokers do if menthol in cigarettes were banned? Behavioral intentions and simulated demand* (O'Connor, Bansal-Travers, Carter, & Cummings, 2012).

## Choice-Based Conjoint methodology

The Choice-Based Conjoint method has been developed since the 1970s, and it is now a technique commonly used for discrete choice modelling (Green, Wind, & Jain, 1972; Green, Krieger, & Wind, 2001). CBC makes it possible to estimate the value that people place on attributes or features that define products and services. The goal of any conjoint survey is to assign specific values to the range of options that buyers consider when making a purchase decision. The respondents express preferences by choosing from sets of concepts, rather than by rating or ranking them.

Conjoint experiments work because the simplification in a conjoint task mirrors the simplification in the marketplace; the complexity of the marketplace encourages consumers to make choices based on relatively few attributes (Huber, 1997). Moreover, the design of conjoint analysis allows the use of the results to develop market simulation models able to describe future scenarios.

In the simulations conducted by SKIM (Coelho & Arink, 2013; Coelho & Moore, 2013), the researchers defined each available tobacco product (cigarettes, hand-rolling tobacco) by pre-set product features such as brand, variant (menthol, non-menthol), distribution channel (legal, illegal) and price (depending on the distribution channel). By systematically varying the availability of products in regular stores and from street vendors, and asking respondents to choose the product that they would purchase each time, the researchers inferred the importance of and preference for different products and their retail channels.

In a first module, respondents faced several screens showing the current market situation, including cigarettes sold through illicit channels labelled as 'non-store selling'. In a second step, designed to represent the market after the ban, the packs of menthol cigarettes were removed from regular shops while they were still available on the black market. Both legal retailers and street vendors offered non-menthol tobacco products in both the simulations.

For a complete description of the methodology used, construction of the sample, and the survey see *The Impact of a Menthol Ban on Illicit Trade in Poland* (Coelho & Arink, 2013) and *The impact of a ban on menthol cigarettes on illicit trade in Finland* (Coelho & Moore, 2013).

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## Results of the Polish CBC

Analysis of the current market scenario showed that 80% of the Polish respondents were aware of the street vendor channel. 1% usually bought cigarettes from street vendors while 45% had never bought a pack of cigarettes from street vendors. When faced with a situation where access to regular stores and street vendors was equal, 15% indicated a preference for lower-price products from street vendors, even when their preferred product was available in regular shops (Coelho & Arink, 2013).

However, for the purposes of this analysis, the main result of the CBC is that, **in Poland, removing menthol cigarettes and making only non-menthol cigarettes available in regular stores would increase the preference share of brands sold by street vendors by 250%, from 15% to 51%.**

## Results of the Finnish CBC

Analysis of the current market scenario showed that 54% of the Finnish respondents have already seen street vendors. 2% usually bought cigarettes from street vendors while 68% had never bought a pack of cigarettes from street vendors. When faced with a situation where access to regular stores and street vendors was equal, 22.6% indicated a preference for lower-price products from street vendors, even when their preferred product was available in regular shops (Coelho & Moore, 2013).

However, for the purposes of this analysis, the main result of the CBC is that, **in Finland, removing menthol cigarettes and making only non-menthol cigarettes available in regular stores would increase the preference share of brands sold by street vendors by 233%, from 23% to 75%.**

The study indicates +196% increase in preference share of brands sold through street vendors (from 23% to 67%) in a market with menthol cigarettes available only at street vendors and complete awareness of self-mentholation products (Coelho & Moore, 2013).

## Projection of the experimental results on other countries

The authors of the study conducted their experiment in Poland and in Finland, and **there are no studies available for other countries.**

Finland and Poland are the two EU countries with the highest shares of consumption of menthol cigarettes (Table a.1, p.32) (Euromonitor International, 2013a). **The Polish and the Finnish experiments have similar results.** The difference in the expected increase in the illicit purchase of menthol tobacco products is 17 percentage points. 250% in Poland, where the starting level of consumption was lower (15%) and 233% in Finland where the share was higher (23%) (Coelho & Arink, 2013; Coelho & Moore, 2013).

The increases indicated by the experiments refer to the illicit market in 2013. Both legal and illegal prices are those observed in 2013. Future variations in the products or in the price differential between legal and illicit cigarettes may increase the propensity of consumers to opt for illicit products. Given that reliable forecasts of neither the price differential nor its relevance in consumers' choice are available, it will be assumed that the rate is constant in time.

**Since respondents had to purchase a tobacco product (no quit-smoking option), it is likely that the above figure overestimates the actual increase in the preference for illicit products.**

### *Increase the knowledge, improve the research*

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Conducting similar experiments in all the Member States would increase the robustness of this kind of analysis and enable the design of more effective policies.

Future experiments should include a stop smoking option among possible answers.

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Given the lack of studies in other countries, the only serious option **is to extend the available results to the other Member States.** Polish and Finnish results have been corrected by the use of ad hoc parameters for each EU Member State. The entire procedure has been conducted twice, once using Polish results and indicators, once using Finnish ones. The combination of the results of the two procedures allows obtaining a minimum and a maximum boundary within which the increase in the purchase of illicit menthol products is expected to be. However, **we are fully aware of the limitations that this choice implies.** It takes only partially into account the different economic, social and cultural variables that influence this choice and that are different among Member States. **Further comparative studies should be conducted to better address countries' specificities.**

To this end, it should be noted that the value, which consumers attribute to the flavour of tobacco with respect to other features of cigarettes is an important predictor of their willingness to elude the ban by purchasing illicit products.



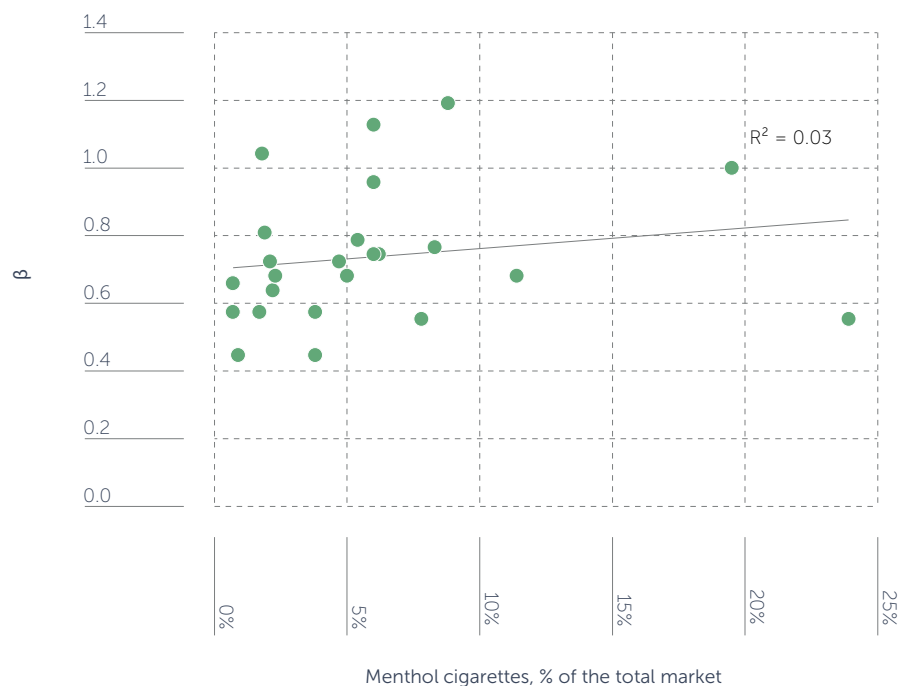
Within the “Attitudes of Europeans towards Tobacco” investigation, researchers of the European Commission asked smokers and ex-smokers, in each Member State, “how important is/was the specific taste such as menthol, spicy, fruity or sweet in your choice of brand of cigarettes?”. The researchers then catalogued the answers as “important”, “non-important” and “don’t know” (European Commission, 2012d).

By comparing the share of respondents stating that specific flavours are “important” in a specific country with the share in Poland first and then in Finland, it is possible to determine whether smokers in that country consider menthol and non-menthol cigarettes to be substitutes more or less than do Polish and Finnish consumers. A second parameter  $\beta_{j,x}$  expresses this idea.

In particular,  $\beta_{j,x} = \frac{T_j}{T_x}$ , where  $T_j$  indicates the share of respondents in country  $j$  who consider a particular flavour “important”, while  $T_x$  indicates the share of respondents in country  $x$  (Poland and then Finland) who considered a particular flavour “important”. Given its construction,  **$\beta_{j,x}$  can be interpreted as the propensity of consumers in country  $j$  to switch between flavoured and non-flavoured cigarettes in comparison with the propensity to switch of consumers in country  $x$**  (Poland and Finland). The fact that consumption of menthol cigarettes in a country is not a good predictor of  $\beta$  in the same country corroborates this interpretation of the parameter (Figure a.2).

**Figure a.2. Relation between  $\beta$  and the market share of menthol cigarettes in the 24 countries analysed**

Source: Transcrime elaboration on Euromonitor International (2012) and KPMG (2013) data



The higher  $\beta_{j,x}$  is, the greater the importance of the characteristic “flavour” for consumers. The greater the importance of menthol, the larger will be the share of menthol smokers who will switch to the black market in the case of a menthol ban.



## The expected increase in the demand for illicit menthol cigarettes

Given its construction,  $\beta_{j,x}$  allows adjusting Polish and Finnish results to the other countries. The increase in demand for illicit menthol cigarettes in country  $j$  would be:  $ID_{j,x} = \beta_{j,x} * ID_x$  where  $ID_x$  is the increase in demand for illicit menthol cigarettes in country  $x$  (250% in Poland and 233% in Finland).

Eurobarometer indicates that 47% of Polish current and ex-cigarette smokers consider specific tastes such as menthol, spicy, fruity or sweet to be “important” in their choice of brand of cigarettes. In Finland, they are the 26%, the EU27 average is 32% (European Commission, 2012d).

In most countries,  $\beta_p(x=p)$  is lower than one, so the increase in the demand for illicit tobacco products is usually lower than in Poland (Table a.3).  $\beta_p$  is higher than one in Austria, where the market share of menthol cigarettes in 2013 is 3.7%, Hungary (2.4%) and Sweden (1.2%) (Table a.1, p.32).

The relevance of menthol flavour in the choice of a brand is lower in Finland than it is in Poland and in the majority of the EU Member States. Therefore  $\beta_f(x=f)$  is higher than one in most of the countries. However, the experimental increase observed in Finland is lower than the one observed in Poland; therefore, the ratio between  $ID_f$  and  $ID_p$  is lower than the ratio between  $\beta_p$  and  $\beta_f$  (Table a.3).

**Table a.3. Parameter  $\beta_{j,x}$  and increase in the demand for illicit menthol cigarettes –  $ID_{j,x}$**

Source: Transcrime elaboration on European Commission (2012d) and Coelho and Arink (2013) data

	Poland		Finland	
	$\beta_{j,p}$	$ID_p$	$\beta_{j,f}$	$ID_f$
Austria	1.04	260.28%	1.88	439.47%
Belgium	0.45	111.55%	0.81	188.34%
Bulgaria	0.81	201.85%	1.46	340.81%
Czech Republic	0.96	239.04%	1.73	403.59%
Denmark	0.74	185.92%	1.35	313.90%
Estonia	0.77	191.23%	1.38	322.87%
Finland	-	233.19%	1.00	233.19%
France	0.57	143.42%	1.04	242.15%
Germany	0.72	180.61%	1.31	304.94%
Greece	0.45	111.55%	0.81	188.34%
Hungary	1.13	281.53%	2.04	475.34%
Ireland	0.64	159.36%	1.15	269.06%
Italy	0.66	164.67%	1.19	278.03%
Latvia	0.68	169.98%	1.23	287.00%
Lithuania	0.74	185.92%	1.35	313.90%
Netherlands	0.72	180.61%	1.31	304.94%
Poland	1.00	249.66%	-	249.66%
Portugal	0.79	196.54%	1.42	331.84%
Romania	0.68	169.98%	1.23	287.00%
Slovakia	0.68	169.98%	1.23	287.00%
Slovenia	0.57	143.42%	1.04	242.15%
Spain	0.57	143.42%	1.04	242.15%
Sweden	1.19	297.47%	2.15	502.25%
UK	0.55	138.11%	1.00	233.19%

## 1.2.4 To what extent could the illicit supply satisfy the increased demand for menthol products?

The change in the illicit demand for menthol tobacco products due to the removal of menthol cigarettes from legal retailers ( $ID_{j,x}$ ) was estimated in parts 1.2.1 to 1.2.3 (Table a.4, p.41).

**Access to illicit menthol cigarettes is the other key variable for determining the actual increase in the consumption of illicit menthol tobacco products after the ban** (O'Connor et al., 2012, p.1336).

It follows that it is necessary **to estimate the share of the additional demand that the supply could cover in each country.**

**Forecasting the potential supply of illicit menthol tobacco products is a complex task** because of the numerous factors affecting it. Social and economic circumstances, changes in the legal market of tobacco products, in regulation and in the level of law enforcement may influence the supply. The longer the time span considered, the greater the likelihood that this variable will change. Hence only **the short-run capacity of the supply to satisfy the new demand has been evaluated**, without taking long-run evolutions into account.

### Illicit flows from outside the EU are used as proxies for the potential illicit supply

**The flow of illicit tobacco products from outside EU has been taken as an indicator of the possible increase in the supply of illicit cigarettes.** There are two reasons for adopting this approach. The first is that, while the ban would involve every country in the EU, **menthol products would be still available outside the EU.** The second is that, according to scholars and law enforcement agencies, connections to Eastern countries such as Ukraine, Russia, Moldova or Belarus are the main determinant of the level of ITTP in a country (Joossens, 2011; Joossens et al., 2012).

KPMG provides estimates of the country of origin of illicit cigarettes for each EU Member State. In particular, it indicates the share of cigarettes coming from the main countries of origin and/or the share of duty-free cigarettes (KPMG, 2013).

The availability of these data allows the construction of the indicator  $S_j$ , which denotes the share of cigarettes from outside the EU and of domestic illicit whites in the total of consumed cigarettes.<sup>17</sup>

$$S_j = \frac{(N_j + IW_j)}{T_j}$$

where:

$S_j$  indicates the share of non-EU and illicit whites cigarettes in market  $j$ <sup>18</sup>

$N_j$  indicates the share of non-EU cigarettes in market  $j$

$IW_j$  indicates the share of domestic illicit white cigarettes in market  $j$

$T_j$  indicates the total consumed cigarettes in market  $j$

17. Domestic whites are packs of domestic market variant, but ones priced below the minimum tax yield. These products are treated as having been illegally sold in the country in question. They have therefore been reclassified as non-domestic (KPMG, 2013, p. 3).

18. KPMG reports domestic illicit whites only in Sweden, where they account for 27.4% of illicit cigarettes (KPMG, 2013).

Duty-free cigarettes have been considered EU cigarettes. The two residual categories (unspecified and other countries) have not been included in the evaluation.<sup>19</sup> The presence of the residual categories, which are not included in the calculation, does not undermine the general validity of the estimate, but it decreases its accuracy. The higher is their share, the greater is the approximation. The availability of fully disentangled data would resolve this shortcoming.

$S_j$  may range from 0 – all the illicit cigarettes consumed in the  $j$  country are from within the EU – to 1 indicating that the black market entirely relies on products from outside the EU or national illicit whites. Countries with a value of  $S_j$  close to 1 will have a large flow of illicit cigarettes from markets where the ban is not in force. In these countries, it is likely that, given an increase in the demand for illicit menthol cigarettes, the supply will be able to expand to satisfy this growth. Likewise, the lower  $S_j$  is the weaker will be the connection with countries where menthol cigarettes are still available, and the lower will be the response of the illicit supply to the ban.

**The interaction of the increase in the demand with the capacity for expansion of the supply determines the actual growth of the consumption of illicit menthol tobacco products.**

In particular, given the specific construction of  $ID_{j,x}$  (Table a.5, p.43) and of  $S_j$ , the actual increase in the consumption  $C_{j,x}$  is:  $C_{j,x} = ID_{j,x} * S_j$ .

**Table a.4. Increase in demand for illicit menthol cigarettes (ID), the capacity of the supply to adapt to the new demand, and the estimated increase in the consumption of illicit menthol cigarettes (C)**

Source: Transcrime elaboration on European Commission (2012d), Coelho and Arink (2013) and KPMG (2013) data

	Poland			Finland		
	ID	S	C	ID	S	C
Austria	260.3%	* 0.21 =	55.1%	439.5%	* 0.21 =	39.1%
Belgium	111.6%	* 0.59 =	66.2%	188.3%	* 0.59 =	111.8%
Bulgaria	201.9%	* 0.12 =	24.2%	340.8%	* 0.12 =	40.8%
Czech Republic	239.0%	* 0.78 =	186.5%	403.6%	* 0.78 =	314.8%
Denmark	185.9%	* 0.30 =	55.4%	313.9%	* 0.30 =	93.5%
Estonia	191.2%	* 1.00 =	191.2%	322.9%	* 1.00 =	322.9%
Finland	233.2%	* 0.91 =	211.9%	233.2%	* 0.91 =	211.9%
France	143.4%	* 0.20 =	28.9%	242.2%	* 0.20 =	48.8%
Germany	180.6%	* 0.08 =	13.6%	304.9%	* 0.08 =	23.0%
Greece	111.6%	* 0.56 =	62.6%	188.3%	* 0.56 =	105.7%
Hungary	281.5%	* 0.90 =	254.0%	475.3%	* 0.90 =	428.9%
Ireland	159.4%	* 0.30 =	47.5%	269.1%	* 0.30 =	80.1%
Italy	164.7%	* 0.58 =	94.7%	278.0%	* 0.58 =	160.0%
Latvia	170.0%	* 1.00 =	170.0%	287.0%	* 1.00 =	287.0%
Lithuania	185.9%	* 1.00 =	185.7%	313.9%	* 1.00 =	313.6%
Netherlands	180.6%	* 0.13 =	23.4%	304.9%	* 0.13 =	39.5%
Poland	249.7%	* 0.91 =	228.1%	249.7%	* 0.91 =	228.1%
Portugal	196.5%	* 0.56 =	110.3%	331.8%	* 0.56 =	186.2%
Romania	170.0%	* 1.00 =	170.0%	287.0%	* 1.00 =	287.0%
Slovakia	170.0%	* 0.13 =	21.9%	287.0%	* 0.13 =	37.0%
Slovenia	143.4%	* 1.00 =	143.4%	242.2%	* 1.00 =	242.2%
Spain	143.4%	* 0.53 =	76.7%	242.2%	* 0.53 =	129.4%
Sweden	297.5%	* 0.50 =	149.7%	502.2%	* 0.50 =	252.8%
UK	138.1%	* 0.17 =	23.9%	233.2%	* 0.17 =	40.3%

19. KPMG reports only residual categories and duty-free as country of origin of cigarettes circulating in Greece and Portugal. This does not allow providing a specific estimate for these two countries. Therefore, the parameter S is the average of the parameters of the other countries, equal to 0.5612.

The upper bound of  $S_j$  is 1; thus  $C_{j,x}$  cannot be higher than  $ID_{j,x}$ . In this simulation, the increase in the consumption of illicit menthol cigarettes is demand-driven. The study does not consider the possibility that a surplus of supply may boost the illicit consumption, for example by reducing the prices of illicit products.

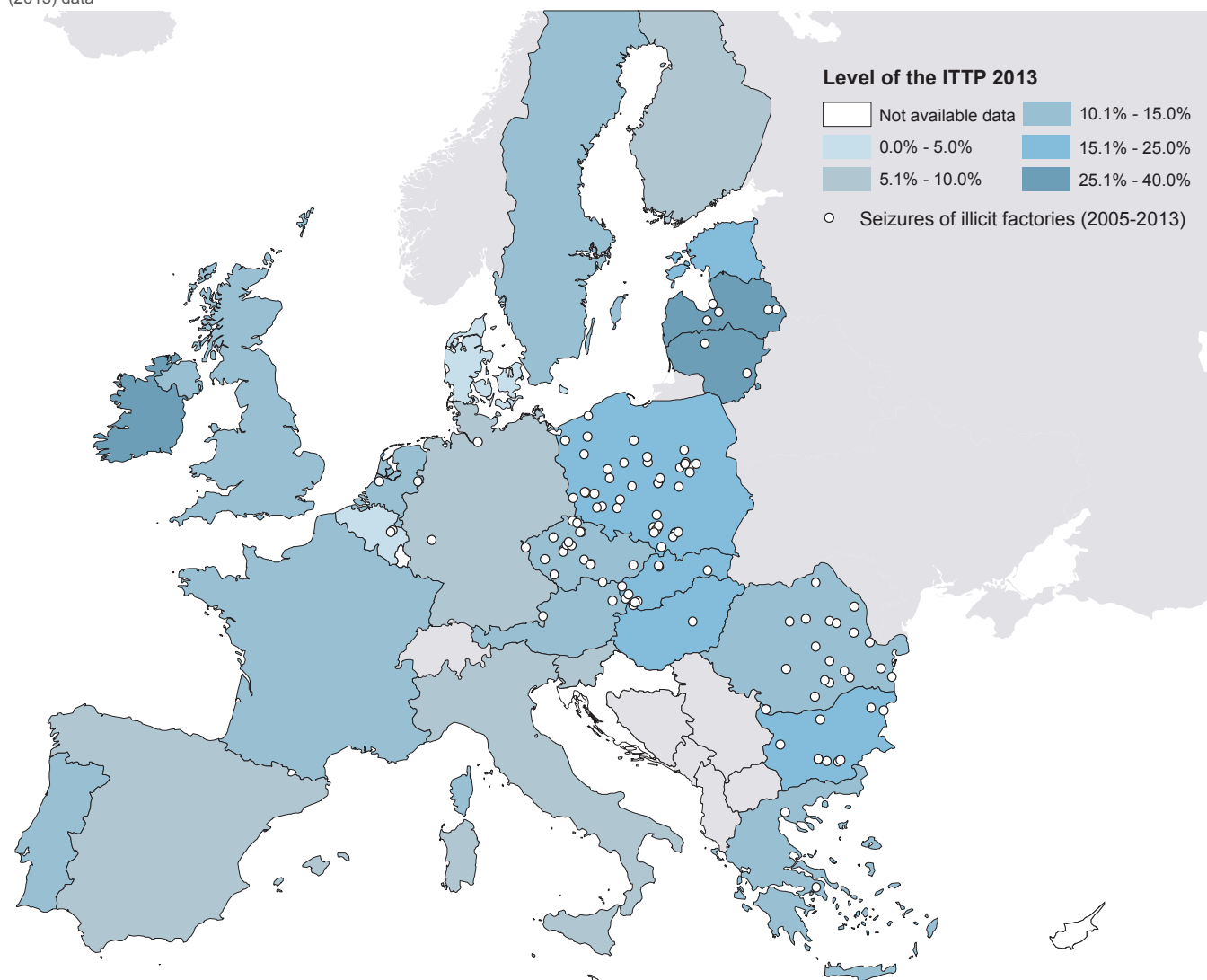
As expected, in the countries on the Eastern border of the EU the vast majority of illicit cigarettes come from outside the EU (Table a.4, p.41). In the Baltic Republic, Romania, Poland and Finland, therefore, it is reasonable to expect that, in response to an increase in the demand for illicit menthol tobacco products, the supply would easily expand to an extent sufficient to satisfy the new demand completely. The opposite would be the case in countries such as the UK, the Netherlands or Germany, where contraband tobacco comes from within the EU.

## Illicit cigarettes manufactured within the EU

Data from KPMG indicate national illicit whites only in the Swedish market. However, several national sources and the OLAF underline that **the phenomenon of the illicit manufacturing of tobacco products within European borders is large and increasing** (Camera dei deputati, 2012; Gallagher & Tallon, 2012).

**Figure a.3. Seizures of illicit tobacco factories in the EU between 2005 and 2013**

Source: Transcrime elaboration on international news stories, law enforcement press releases, and PMI (2013) data



The phenomenon is widespread in almost the entire EU, but it disproportionately affects eastern Member States, as testified by the number of factories seized in those regions (Figure a.3, p.42) (WHO, 2009; Camera dei deputati, 2012; Gallagher & Tallon, 2012; Ministry of the Interior, 2012).

It is likely that tobacco products illicitly manufactured in the EU have been included in the category “unspecified” by KPMG. As consequence, they do not contribute to the estimation of the potential supply, which may therefore be higher.

## 1.2.5 What is the variation in the level of the ITTP due to the ban on menthol tobacco products?

Once the increase in the consumption of illicit menthol cigarettes has been estimated, it is possible to **forecast also the growth of the entire black market** due to the ban on menthol tobacco products.

The initial share of menthol cigarettes within the illicit market derives from point 2 (Table a.2, p.34). **The percentage increase in the level of the ITTP is simply the product of the estimated increase in illicit consumption of menthol products  $C_{j,x}$  (Table a.4, p.41) and the share of menthol products in a given black market  $IM_j$  (Table a.2, p.34).**

Thanks to Euromonitor International’s forecasts for the period 2013-2017, it is possible to calculate the impact of the ban in the next years (Table a.5). The assumption behind this forecast is that consumers’ attitudes will not change in the short term.

**Table a.5. Increase in the level of the ITTP due to the ban on menthol cigarettes – Polish parameters**

Source: Transcrime elaboration on Euromonitor International (2013a) data

	2012	2013	2014	2015	2016	2017
Austria	1.90	1.78	1.78	1.78	1.78	1.78
Belgium	2.78	2.63	2.78	2.78	2.92	3.07
Bulgaria	0.78	0.82	0.86	0.90	0.94	0.94
Czech Republic	6.78	7.12	7.34	7.57	7.80	7.91
Denmark	1.75	1.75	1.72	1.72	1.72	1.72
Estonia	1.26	1.28	1.30	1.30	1.28	1.26
Finland	26.42	26.75	27.64	28.19	28.52	28.85
France	1.55	1.55	1.55	1.59	1.59	1.63
Germany	0.28	0.29	0.29	0.31	0.31	0.31
Greece	1.28	1.28	1.28	1.28	1.28	1.28
Hungary	6.49	6.49	6.27	2.16	0.11	0.11
Ireland	0.85	0.85	0.92	0.92	0.89	0.81
Italy	1.05	1.05	1.05	1.05	1.05	1.05
Latvia	1.04	1.09	1.13	1.23	1.23	1.23
Lithuania	1.47	1.51	1.54	1.56	1.61	1.63
Netherlands	1.64	1.61	1.57	0.00	0.00	0.00
Poland	15.55	15.55	15.55	15.95	15.95	16.35
Portugal	0.00	0.00	0.00	0.00	0.00	0.00
Romania	0.79	0.79	0.79	0.79	0.79	0.79
Slovakia	0.00	0.00	0.00	0.00	0.00	0.00
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00
Spain	0.26	0.30	0.30	0.30	0.30	0.30
Sweden	1.82	1.80	1.78	1.78	1.78	1.78
UK	1.33	1.36	1.40	1.35	1.27	1.06

The ban would cause an average national increase in the ITTP of 3.21% with respect to 2012 data and of 3.24% with respect to 2013 forecasts. The value has been calculated considering Polish experiment and Polish parameters (Table a.5, p.43). In Hungary (+6.49% with respect to 2013 forecasts), Czech Republic (+7.12%), Poland (+15.55%) and Finland (+26.75%), the increase would be particularly large (Table a.5, p.43 and Figure a.4).

The expected average increase is higher when the base of the calculus is Finland. This result was expected since  $ID_f$  is larger than  $ID_p$  and S does not vary in the two calculi. The ITTP would increase on average by 4.22% with respect to 2012 data and by 4.25% with respect to the forecast for 2013 (Table a.6 and Figure a.4).

**Table a.6. Increase in the level of the ITTP due to the ban on menthol cigarettes – Finnish parameters**

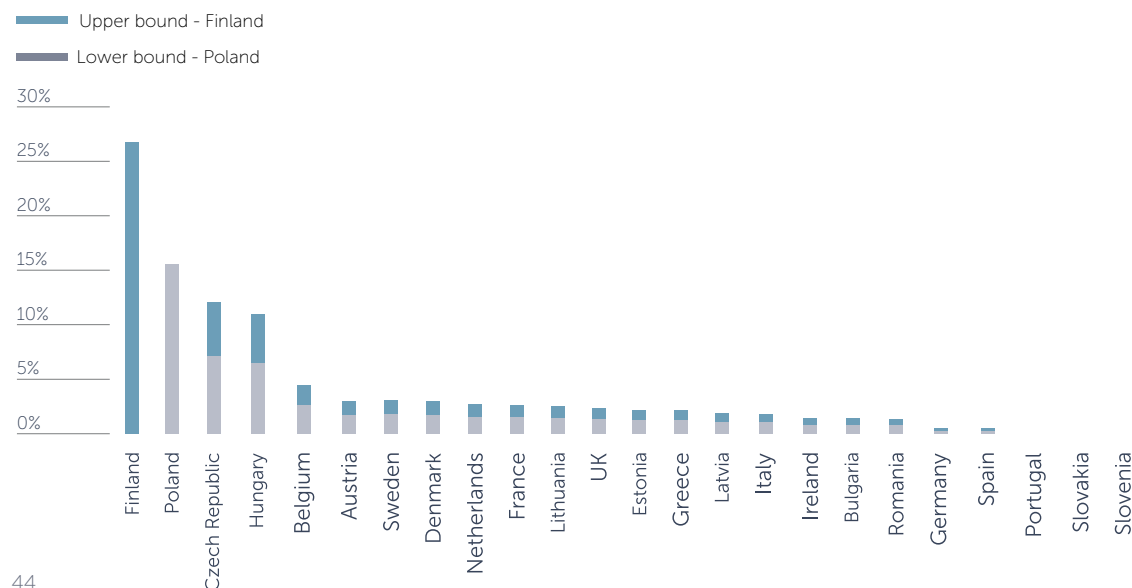
Source: Transcrime elaboration on Euromonitor International (2013a) data

	2012	2013	2014	2015	2016	2017
Austria	3.20	3.01	3.01	3.01	3.01	3.01
Belgium	4.69	4.44	4.69	4.69	4.94	5.18
Bulgaria	1.31	1.38	1.45	1.52	1.58	1.58
Czech Republic	11.45	12.02	12.40	12.78	13.16	13.36
Denmark	2.95	2.95	2.90	2.90	2.90	2.90
Estonia	2.14	2.16	2.19	2.19	2.16	2.14
Finland	26.42	26.75	27.64	28.19	28.52	28.85
France	2.62	2.62	2.62	2.69	2.69	2.76
Germany	0.48	0.50	0.50	0.52	0.52	0.52
Greece	2.16	2.16	2.16	2.16	2.16	2.16
Hungary	10.95	10.95	10.58	3.65	0.18	0.18
Ireland	1.43	1.43	1.56	1.56	1.49	1.37
Italy	1.77	1.77	1.77	1.77	1.77	1.77
Latvia	1.76	1.84	1.92	2.07	2.07	2.07
Lithuania	2.48	2.56	2.59	2.63	2.71	2.75
Netherlands	2.78	2.72	2.66	0.00	0.00	0.00
Poland	15.55	15.55	15.55	15.95	15.95	16.35
Portugal	0.00	0.00	0.00	0.00	0.00	0.00
Romania	1.34	1.34	1.34	1.34	1.34	1.34
Slovakia	0.00	0.00	0.00	0.00	0.00	0.00
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00
Spain	0.44	0.51	0.51	0.51	0.51	0.51
Sweden	3.07	3.03	3.00	3.00	3.00	3.00
UK	2.25	2.30	2.36	2.28	2.14	1.78

**Figure a.4. Estimated increase in the level of the ITTP due to the ban on menthol cigarettes**

Source: Transcrime elaboration on Euromonitor International (2013a) data

Note: the initial level is the estimated level of the ITTP in 2012.



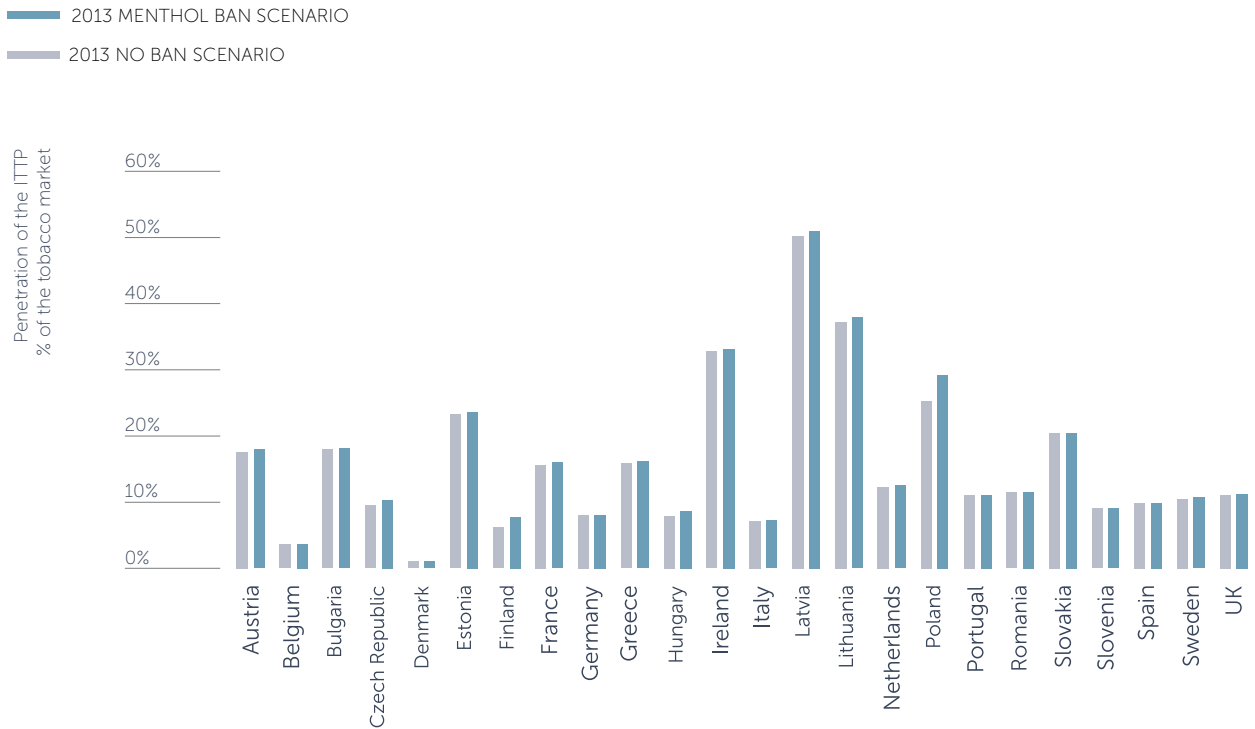
Since the ITTP would grow more in countries with an already large black market (Poland is the first illicit market in volume terms), **the estimated total increase at the EU level would be much higher than the national average. The ITTP would increase by 4.43% with respect to the estimated level in 2012, if Polish experiment is taken into account; by 5.14% if Finnish experiment is considered.**

Given the initial level of penetration of the ITTP (Figure a.1, p.30), the ban is likely to affect especially Poland where the black market is already large (Figure a.5).

**Figure a.5. 2013 estimated level of the ITTP with and without the ban on menthol cigarettes**

Source: Transcrime elaboration on Euromonitor International (2013a) data

Note: the increase in the level of the ITTP due to menthol ban represented in the graph is the average of the estimates based on the Polish and the Finnish experiments.



## Check the results

The overall increase in the level of the ITTP depends on the estimate of the initial volume of illicit cigarettes circulating in each market. The magnitude of the growth would change if the relative weight of the various national markets varied.

Using another estimate of the initial level of the ITTP in each market would make it possible to check the results and to gain better understanding of its determinants.

To have a meaningful comparative estimation of the illicit volumes we considered 2012 data by Euromonitor International and reapplied the entire methodology to the KPMG data for 2012 using both Polish and Finnish results.

Combining the data of the illicit volumes in 2012 provided by KPMG with the estimates obtained exploiting the Polish experiment, the result would be 2.86%. The result based on the level of the ITTP estimated by Euromonitor International is 4.43%. The ITTP would increase by a value ranging between 5.14% (Euromonitor International) and 3.54% (KPMG) using the results of the Finnish experiment as a base. Therefore, **the increase in the level of the ITTP in the EU due to the ban of menthol cigarettes is expected to range between 2.86% (KPMG estimate of the ITTP – Polish experiment) and 5.14% (Euromonitor International estimate of the ITTP – Finnish experiment).**

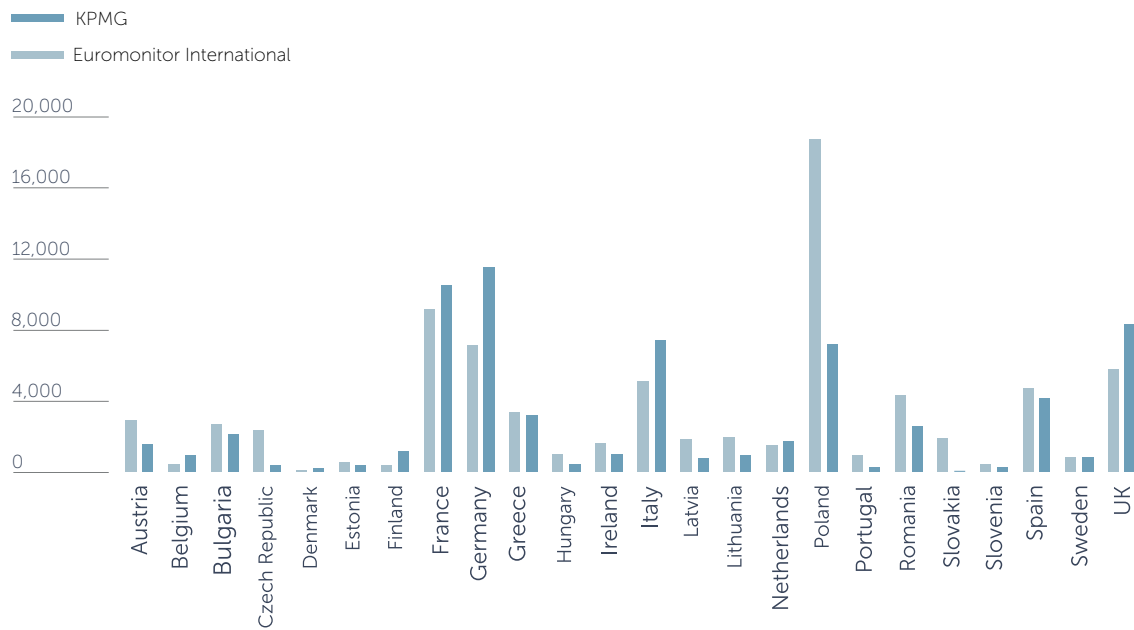
A key driver of the difference between the two figures is the difference in the estimated illicit volume circulating in Poland (Figure a.6). For 2012, Euromonitor International estimates 16.2 bn sticks, while KPMG estimates 6.2 bn (Euromonitor International, 2013b; KPMG, 2013). Calculating the level of the ITTP in Poland is extremely difficult. The large quantity of cigarettes transiting across the country towards European markets is a key cause of this difficulty (Ministry of Finance, 2012; Tokarski, 2012).

**Since Poland is the first country in terms of increase in the ITTP, different data on the initial level of the ITTP cause differences when evaluating the increase at the EU level in volume terms.**

**These results again underline the importance of having official and reliable data on the levels of the ITTP and their evolutions.**

**Figure a.6. Comparison between the estimates of the ITTP in volume terms in 2012**

Source: Transcrime elaboration on Euromonitor International (2013a) and KPMG (2013) data





# PART 2

## *Ban on slim cigarettes*

### 2.1 Estimate of the impact of banning slim cigarettes on the level of the ITTP

The purpose of this section is to provide a **quantitative estimate of the change, if any, in the level of the ITTP in EU Member States due to the removal of slim cigarettes from the EU legal tobacco market.**

Evaluation of the consequences of a ban on slim cigarettes encounters the same difficulties as faced when calculating the effect of a possible ban on menthol cigarettes. The substantial shortage of data and information on the attitudes of tobacco consumers towards illicit products has been the main challenge in conduct of the analysis.

### 2.2 Methodology

The methodology adopted to evaluate the potential effects of a ban on slim cigarettes on the European ITTP replicates the approach proposed for menthol cigarettes.

The estimate relies on the collection of key data and intermediate estimations, which are the answers to a series of questions:

- *What is the level of penetration of the ITTP in the EU Member States?* – The estimation of the level of the ITTP allows comparison between pre and post ban levels and assessment of the impact of the ban itself.
- *What is the share of slim cigarettes within the illicit markets?* – The influence of the ban on the ITTP would concentrate on the slim segment of the illicit market.
- *How would the ban change the demand for illicit slim cigarettes?* – A key step in the analysis is to understand how smokers would react to the ban.
- *To what extent could the illicit supply satisfy the increased demand for slim products?* – The possible increase in the illicit consumption would depend on the capacity of the supply to satisfy the increasing demand.

Once these data have been collected and estimated, it is possible to answer the main research questions:

- *What is the variation in the level of the ITTP due to the banning of slim tobacco products?*

**The overall analysis furnishes an indicative range of the possible effects of banning slim cigarettes on the level of the ITTP in the EU.**

## 2.2.1 What is the level of penetration of the ITTP in the EU Member States?

**Evaluating the current penetration level of the ITTP in each tobacco market** is the first step in estimating the impact of the ban on slim cigarettes. The initial level of the ITTP is crucial for evaluating the possible change due to the ban.

As in the case of menthol cigarettes, the absence of official European dataset requires the exploitation of estimates by private market analysts. In particular, the data used are from Euromonitor International datasets and from the results of KPMG's Project Star.

See 1.2.1 *What is the level of penetration of the ITTP in the EU Member States?*, at p.29 or (Euromonitor International, 2012; KPMG, 2013) for a brief description of the data collection methods and for the estimate of the initial level of the ITTP (Figure a.3, p.42).

## 2.2.2 What is the share of slim cigarettes within the illicit markets?

*There are no available estimates of the share of illicit slim cigarettes*

Once the level of the ITTP in a given market has been estimated, the next step in analysis of the impact of the ban is to **determine the weight of the traffic of illicit slim cigarettes within the black market.**

Diameter and packaging differentiate cigarettes in the legal market. They are likely to differentiate illicit products as well. However, despite the importance of differentiation in the tobacco market, most of the available sources on the ITTP – seizures for example – do not catalogue characteristics of the products such as the flavour or the packaging.

As for evaluation of the size of the national black markets, the ideal solution would be to exploit international official sources. However, to date, **neither official nor unofficial figures on the size of the slim cigarette illicit market in the EU are available.**

## Data on non-domestic slim cigarettes enable estimation of the share of illicit slim cigarettes

This step of the analysis replicates the approach adopted for menthol cigarettes described in 1.2.2 *What is the share of menthol cigarettes within the illicit markets?* at p.31.

As for menthol cigarettes, the availability of data on:

- the national level of the ITTP – Euromonitor International and KPMG;
- the share of slim cigarettes in the tobacco market – Euromonitor International;
- non-domestic cigarettes – KPMG;
- the share of slim cigarettes among non-domestic cigarettes – KPMG;

enables estimation of the penetration level of slim cigarettes in the national black markets to be made in a manner more precise than just assuming that the share of slim cigarettes in the illicit market is equal to the share of slim cigarettes in the licit market.

The key step is the identification of a parameter  $\alpha_j$  expressing the propensity of consumers of slim cigarettes to purchase illicit cigarettes with respect to the consumers of all tobacco products regardless of their specific packaging in country  $j$ . The share of slim cigarettes in the illegal market of a given country ( $IS_j$ ) would be estimated as the product of the parameter  $\alpha_j$  and of the share of slim cigarettes in the legal market ( $LS_j$ ).  **$IS_j = \alpha_j * LS_j$** .

The data used to calculate  $\alpha_j$  are the share of non-domestic slim cigarettes in the total of slim cigarettes in the  $j$  market. It is then necessary to determine which part of these cigarettes is illicit and which is non-domestic, but legal. The available data report the share of total legal non-domestic  $ND(L)$  cigarettes in the entire market without distinguishing between menthol and non-menthol cigarettes. Then, to obtain  $\alpha_j$  it is necessary to assume that the share of legal non-domestic among menthol cigarettes is equal to the overall share of legal non-domestic cigarettes.

Accepting this simplification, it follows that

$$S_j = ND(T)_{slim} * \frac{ITTP}{ITTP + ND(L)}$$

where:

$S$	is the share of illicit slim cigarettes in total consumption of slim cigarettes
$ND(T)_{slim}$	is the share of total non-domestic slim cigarettes in total consumption of slim cigarettes
$ITTP$	represents the level of penetration of the ITTP in the given country
$ND(L)$	represents the penetration of legal non-domestic cigarettes in the given country

Once  $S$  has been calculated, then  $\alpha_j = S/C$ . As done for menthol cigarettes, it is now possible to adjust the Euromonitor International data on the level of consumption of slim cigarettes ( $LS_j$ ) (Table a.7, p.50) to obtain the share of slim cigarettes in the total illicit market ( $IS_j$ ) (Table a.8, p.51). As said,  **$IS_j = \alpha_j * LS_j$** .

Again, if  $0 < \alpha_j < 1$ , then consumers of slim cigarettes have a lower propensity to purchase illicit tobacco products than tobacco consumers in general. Conversely, if  $\alpha_j > 1$ , consumers of slim cigarettes tend to purchase illicit products more than other smokers do.

**Table a.7. Share of slim cigarettes as % of the tobacco market**

Source: Euromonitor International (2013a) data

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria	3.9	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.3	4.2
Belgium	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Bulgaria	17.7	19	24.2	26.5	27.3	28.1	28.6	29.4	30	30.3	30.4	30.7
Croatia	0.8	1.2	2.2	2.9	3.8	3.9	4.3	4.6	4.9	5.2	5.5	7.3
Czech Republic	2.1	4.4	6.0	6.7	7.4	8.0	8.4	8.7	8.9	9.2	9.5	9.7
Denmark	2.8	2.9	3.0	3.1	3.1	3.1	3.3	3.4	3.6	3.7	3.8	3.9
Estonia	6.2	7.0	9.2	9.7	9.6	9.7	9.8	9.8	9.8	9.7	9.6	9.5
Finland	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
France	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.6	1.7	1.7	1.7
Germany	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	1.9	1.9	1.8	1.7
Greece	2.8	6.2	11.7	12.4	12.8	13.0	10.5	8.0	6.8	5.7	5.0	3.8
Hungary	4.4	4.8	5.2	6.9	9.0	10.2	12.0	12.4	12.7	7.6	0.2	0.2
Ireland	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Italy	6.9	6.9	7.0	7.1	7.3	7.4	7.5	7.6	7.6	7.7	7.7	7.7
Latvia	3.6	6.1	8.0	9.5	9.9	10.7	10.6	11.0	11.8	12.4	12.6	2.7
Lithuania	4.0	4.5	5.7	6.9	9.2	10.4	11.6	12.2	12.9	15.6	17.1	17.4
Net herlands	0.7	0.8	0.9	1.0	1.1	1.1	1.3	1.4	1.6	1.8	1.9	2.1
Poland	12.0	14.0	14.0	16.0	19.0	20.0	20.0	20.7	20.7	21.5	21.5	21.5
Portugal	3.5	3.6	3.7	3.7	3.8	4.8	5.0	5.1	5.1	5.2	5.2	5.2
Romania	1.4	3.5	6.1	7.6	8.5	9.7	10.4	11.3	11.9	12.7	13.3	13.9
Slovakia	2.5	2.6	2.8	3.5	3.8	4.2	4.7	5.7	6.3	6.7	6.8	6.9
Slovenia	1.0	1.2	1.5	1.7	2.0	2.5	3.0	3.7	4.4	5.0	5.4	5.7
Spain	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Sweden	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
UK	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5

The estimate indicates that **the slim cigarette component of many national black markets may be more than one-fifth of the total** (Table a.7). Two factors contribute to explaining this finding:

- In most countries, the non-domestic incidence of slim cigarettes in total slim cigarette consumption is higher than the general incidence of non-domestic cigarettes in total cigarette consumption (KPMG 2013, p.35).
- In several countries, the consumption of slim cigarettes in volume terms is more than one-tenth of the total tobacco market.

The high incidence of non-domestic slim cigarettes in countries with a low consumption of slim cigarettes (Table a.7) such as the UK (*as* equal to 4.4), the Netherlands (*as* equal to 3.5) or Denmark (*as* equal to 7.7) may be due to levels of legal non-domestic cigarettes higher than estimated. It follows that, in these countries, also the illicit incidence of slim cigarettes may be overestimated.

**Table a.8. Share of slim cigarettes as % of the illicit tobacco market – IS<sub>j</sub>**

Source: Transcrime elaboration on Euromonitor International (2013a) and KPMG (2013) data

Note: KPMG reports a share of non-domestic menthol cigarettes equal to 0 in Portugal, Slovakia and Slovenia; therefore, the parameter  $\alpha$  in these countries is 0 as well. Croatia joined the EU on July 1<sup>st</sup> 2013. Project Star does not include any data concerning Croatia yet. Therefore, Croatia is not included in the analysis.

	$\alpha_s$	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Austria</b>	1.5	5.7	5.8	5.8	5.8	5.8	6.0	6.0	6.0	6.1	6.1	6.3	6.1
<b>Belgium</b>	3.2	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3
<b>Bulgaria</b>	1.5	26.7	28.6	36.4	39.9	41.1	42.3	43.1	44.3	45.2	45.6	45.8	46.2
<b>Czech Republic</b>	0.6	1.3	2.7	3.6	4.1	4.5	4.8	5.1	5.3	5.4	5.6	5.8	5.9
<b>Denmark</b>	7.7	21.6	22.4	23.2	23.9	23.9	23.9	25.5	26.2	27.8	28.6	29.3	30.1
<b>Estonia</b>	1.4	8.4	9.5	12.5	13.1	13.0	13.1	13.3	13.3	13.3	13.1	13.0	12.9
<b>Finland</b>	3.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<b>France</b>	1.3	1.5	1.7	1.7	1.7	1.8	1.9	1.9	1.9	2.1	2.2	2.2	2.2
<b>Germany</b>	1.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	1.9	1.9	1.8	1.7
<b>Greece</b>	2.0	5.6	12.4	23.4	24.8	25.6	26.0	21.0	16.0	13.6	11.4	10.0	7.6
<b>Hungary</b>	1.3	5.6	6.1	6.6	8.8	11.5	13.0	15.3	15.8	16.2	9.7	0.3	0.3
<b>Ireland</b>	2.2	0.9	0.9	0.9	0.9	1.1	1.1	1.3	1.3	1.3	1.6	1.6	1.6
<b>Italy</b>	2.1	14.5	14.5	14.7	14.9	15.4	15.6	15.8	16.0	16.0	16.2	16.2	16.2
<b>Latvia</b>	1.0	3.6	6.2	8.1	9.6	10.0	10.8	10.7	11.1	11.9	12.5	12.7	2.7
<b>Lithuania</b>	1.8	7.3	8.2	10.4	12.6	16.8	18.9	21.1	22.2	23.5	28.4	31.1	31.7
<b>Netherlands</b>	3.5	2.4	2.8	3.1	3.5	3.8	3.8	4.5	4.8	5.5	6.2	6.6	7.3
<b>Poland</b>	1.0	12.6	14.7	14.7	16.8	19.9	21.0	21.0	21.7	21.7	22.6	22.6	22.6
<b>Portugal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Romania</b>	0.6	0.8	2.0	3.4	4.3	4.8	5.4	5.8	6.3	6.7	7.1	7.5	7.8
<b>Slovakia</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Slovenia</b>	0.5	0.5	0.6	0.7	0.8	0.9	1.2	1.4	1.7	2.0	2.3	2.5	2.7
<b>Spain</b>	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
<b>Sweden</b>	1.5	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5
<b>UK</b>	4.4	0.9	0.9	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8	2.2	2.2

## 2.2.3 How would the ban change the demand for illicit slim cigarettes?

**Understanding the reaction of slim consumers to the ban is the key step** in determining how the ban on slim cigarettes would affect the ITTP.

Once again, the methodology adopted to estimate the effect of a ban on slim cigarettes is the same as the one adopted for menthol cigarettes and described at 1.2.3 *How would the ban change the demand for illicit menthol cigarettes?* at p.34.

**The reaction of consumers to the ban of slim cigarettes has been investigated by means of a Choice-Based Conjoint experiment conducted in Romania** (Comsa & Arink, 2013).<sup>20</sup> The methodology adopted replicates the one adopted in Poland and in Finland and briefly described in Choice-Based Conjoint methodology, p.36.

As in the case of a ban on menthol cigarettes, in response to a ban on slim products, some consumers might quit smoking entirely, others might switch to other legally available tobacco products, and still others might seek out illicit slim cigarettes.

20. The Impact of a Ban on slim cigarettes on illicit trade in Romania (Comsa & Arink, 2013). Philip Morris International commissioned the study to SKIM consumer research.

Significantly, respondents did not have the option of choosing not to purchase any tobacco products if legal slim cigarettes were unavailable. They could choose between slim cigarettes distributed by street vendors or non-slim tobacco products furnished by both legal retailers and illicit channels. However, it would be crucial to determine the share of consumers that would not buy any tobacco products in the case of a ban on slim cigarettes.

## Results of the CBC

For the purposes of this analysis, the main result of the CBC is that, **in Romania, removing slim cigarettes and the availability of only regular-size cigarettes in legal stores increases the preference share of cigarettes sold through street vendors by 195%, from 14% to 42%** (Comsa & Arink, 2013, p. 33).

According to this result, regular size cigarettes and slim cigarettes are closer substitutes than are non-flavoured cigarettes and menthol cigarettes. The increase indicated by the experiment refers to the tobacco market situation in the first months of 2013. Future variations in the products or in the price differential between legal and illicit products may increase the propensity of consumers to opt for illicit products. Since neither reliable forecasts of the price differential nor its importance in consumers' choice are available, the rate will be assumed as constant in time.

**The above figure is likely to overestimate the actual increase in the preference for illicit products because respondents could not choose not to purchase any tobacco product.**

## Projection of the experimental results on other countries

The authors of the study conducted their experiment in Romania, and there are no studies available for other countries.

### *Increase the knowledge, improve the research*

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Conducting similar experiments focused on cigarette diameter and packaging in all the Member States would increase the robustness of the analysis and enable the design of more effective policies.

Future experiments should include a stop smoking option among possible answers.

As in the case of the menthol ban, the lack of research imposes the **extension of the Romanian results to the other Member States**.

To this end, it should be noted that the value, which consumers attribute to the diameter and the packaging with respect to other features of cigarettes is an important predictor of their willingness to elude the ban on purchasing illicit products. The higher the value that they give to these features, the greater would be their reluctance to substitute slim cigarettes with regular ones.

Within the "Attitudes of Europeans towards Tobacco" investigation, the researchers of the European Commission asked smokers and ex-smokers, in each Member State, "how important is/was the packaging in your choice of brand of cigarettes?". The researchers then catalogued the answers as "important", "non-important" and "don't know" (European Commission, 2012d).

Comparing the share of respondents asserting that packaging is "important" in a specific country with the share in Romania makes it possible to understand if consumers in that specific country are more inclined to switch from slim to regular cigarettes than Romanian are. This information will indicate in which direction to correct the results of the CBC experiment. Parameter  $\beta$ s **will represent the propensity to switch between regular and slim cigarettes**.

To be stressed is that SKIM's survey in Romania investigated consumer opinions regarding the generic importance of packaging and did not specifically refer to a thinner pack like the one for slim cigarettes. Given the absence of more precise observations, the national correction will be calculated exploiting these data.

$\beta s_j = \frac{TP_j}{PT_p}$ , where  $TP_j$  indicates the share of respondents in country  $j$  who consider the packaging to be "important", while  $TP_r$  indicates the share of Romanians who considered the packaging to be "important".

The higher  $\beta s_j$  is, the greater the importance of packaging for the consumers in the country. The greater the importance of packaging, the larger will be the number of slim cigarette smokers switching to the black market in the case of a ban.

## The expected increase in the demand for illicit slim cigarettes

Once  $\beta s_j$  has been calculated, it follows that  $IDS_j = \beta s_j * IDS_r$ , where  $IDS_j$  is the increase in the demand for illicit slim cigarettes in country  $j$  and  $IDS_r$  is the increase in the demand for illicit menthol cigarettes in Romania, equal to 195% (Table a.9).

**Table a.9. Parameter  $\beta$  and increase in the demand for illicit menthol cigarettes –  $IDS_j$**

Source: Transcrime elaboration on European Commission (2012d) and Comsa and Arink (2013) data

	$\beta s$	$IDS$
<b>Austria</b>	1.00	194.37%
<b>Belgium</b>	0.57	111.07%
<b>Bulgaria</b>	1.54	298.49%
<b>Czech Republic</b>	1.36	263.78%
<b>Denmark</b>	0.61	118.01%
<b>Estonia</b>	0.57	111.07%
<b>Finland</b>	0.57	111.07%
<b>France</b>	0.43	83.30%
<b>Germany</b>	0.50	97.18%
<b>Greece</b>	1.32	256.84%
<b>Hungary</b>	1.32	256.84%
<b>Ireland</b>	0.93	180.48%
<b>Italy</b>	1.46	284.61%
<b>Latvia</b>	0.86	166.60%
<b>Lithuania</b>	1.04	201.31%
<b>Netherlands</b>	0.46	90.24%
<b>Poland</b>	1.29	249.90%
<b>Portugal</b>	1.11	215.19%
<b>Romania</b>	1.00	194.37%
<b>Slovakia</b>	2.07	402.62%
<b>Slovenia</b>	0.89	173.54%
<b>Spain</b>	0.89	173.54%
<b>Sweden</b>	0.75	145.77%
<b>UK</b>	0.54	104.12%

## 2.2.4 To what extent could the illicit supply satisfy the increased demand for slim products?

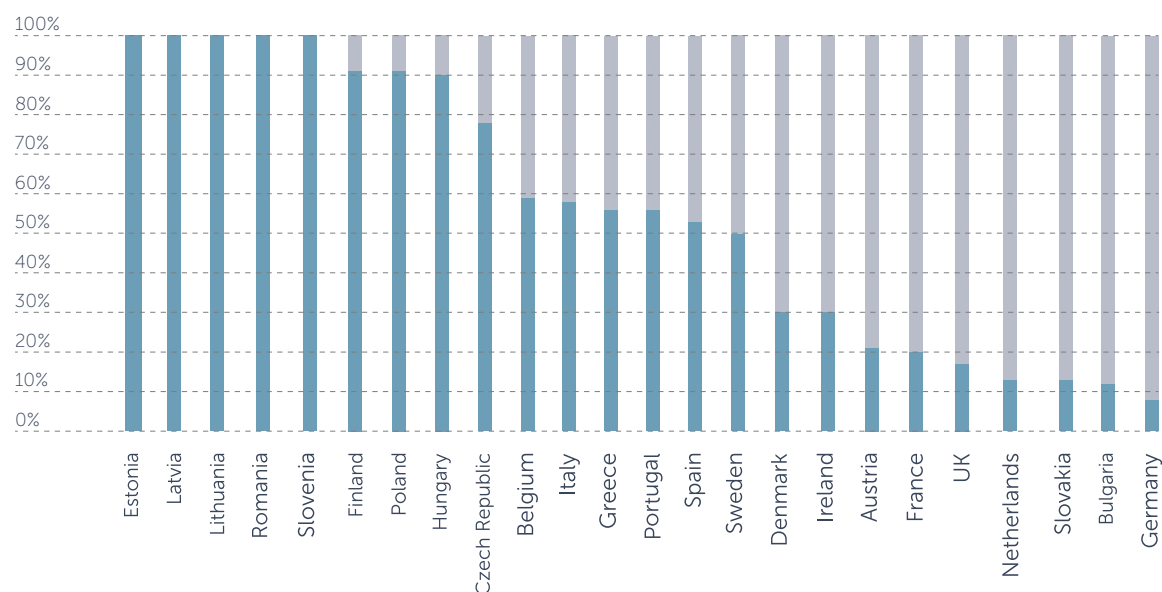
Estimated in parts 2.2.1 to 2.2.3 was the change in the illicit demand for slim tobacco products due to the removal of menthol cigarettes from legal retailers ( $ID_s$ ) (Table a.9, p.53).

As for menthol cigarettes, **the other fundamental driver of the actual increase in the consumption of illicit products is the access to illicit slim cigarettes.**

The technique adopted to evaluate the capacity of the supply to adapt to the new level of demand has already been described at p.40. Reported here is the share of the demand that the supply could cover (Figure a.7).

**Figure a.7. Estimated increase in the demand that the supply could cover –  $S_j$**

Source: Transcrime elaboration on KPMG (2013) data



## The estimated increase in the consumption of illicit slim cigarettes

**The interaction between the increase in the demand with the capacity of the supply to expand determines the actual growth of the consumption of illicit slim cigarettes.**

Given the construction of  $ID_s$  (Table a.9, p.53) and of  $S_j$  (Figure a.7) **the actual increase in the consumption of slim cigarettes  $Cs_j$  is:  $Cs_j = ID_s * S_j$** <sup>21</sup>

21. KPMG reports only residual categories and duty-free as country of origin of cigarettes circulating in Greece and Portugal. This does not allow providing a specific estimate for these two countries. Therefore, the parameter S is the average of the parameters of the other countries, equal to 0.5612.



## Illicit cigarettes manufactured within the EU

The supply of illicit menthol cigarettes has probably been underestimated because of the complexity of cataloguing national illicit whites effectively. As a consequence of the fact that the potential market for illicit slim cigarettes is larger than the market for illicit menthol cigarettes, the number of illicit factories may be higher, so that the underestimation is higher as well.

**Table a.10. Increase in demand for illicit slim cigarettes (ID), the capacity of the supply to adapt to the new demand, and the estimated increase in the consumption of illicit slim cigarettes (C).**

Source: Transcrime elaboration on European Commission (2012d), Coelho and Arink (2013) and KPMG (2013) data

	<i>IDs</i>	*	<i>S</i>	=	<i>Cs</i>
<b>Austria</b>	194.37%	*	0.21	=	41.18%
<b>Belgium</b>	111.07%	*	0.59	=	65.95%
<b>Bulgaria</b>	298.49%	*	0.12	=	35.77%
<b>Czech Republic</b>	263.78%	*	0.78	=	205.75%
<b>Denmark</b>	118.01%	*	0.30	=	35.14%
<b>Estonia</b>	111.07%	*	1.00	=	111.07%
<b>Finland</b>	111.07%	*	0.91	=	100.92%
<b>France</b>	83.30%	*	0.20	=	16.79%
<b>Germany</b>	97.18%	*	0.08	=	7.32%
<b>Greece</b>	256.84%	*	0.56	=	144.13%
<b>Hungary</b>	256.84%	*	0.90	=	231.73%
<b>Ireland</b>	180.48%	*	0.30	=	53.74%
<b>Italy</b>	284.61%	*	0.58	=	163.75%
<b>Latvia</b>	166.60%	*	1.00	=	166.60%
<b>Lithuania</b>	201.31%	*	1.00	=	201.11%
<b>Netherlands</b>	90.24%	*	0.13	=	11.69%
<b>Poland</b>	249.90%	*	0.91	=	228.27%
<b>Portugal</b>	215.19%	*	0.56	=	120.76%
<b>Romania</b>	194.37%	*	1.00	=	194.37%
<b>Slovakia</b>	402.62%	*	0.13	=	51.94%
<b>Slovenia</b>	173.54%	*	1.00	=	173.54%
<b>Spain</b>	173.54%	*	0.53	=	92.76%
<b>Sweden</b>	145.77%	*	0.50	=	73.37%
<b>UK</b>	104.12%	*	0.17	=	18.00%

### 2.2.5 What is the variation in the level of the ITTP due to the ban on slim cigarettes?

Once the increase in the consumption of illicit slim cigarettes has been estimated, it is possible to **forecast the growth of the entire black market**. The approach is the same as for menthol cigarettes.

**The percentage increase in the level of the ITTP is the product of the estimated increase in illicit consumption of slim products  $Cs_j$  (Table a.10) and the weight of slim cigarettes in the black market  $IS_j$  (Table a.8, p.51).**

Assuming the attitudes of consumers to be constant over the period 2013-2016, it is possible to calculate the increase in the impact of the ban on slim cigarettes with respect to Euromonitor International's projection for the period 2013-2016 (Table a.11).

By exploiting also the estimates of the illicit volumes provided by KPMG, it is possible to replicate the analysis and to check the results.

**The average increase in the level of the ITTP**, with respect to Euromonitor International's estimate for the 2012, **would be 11.2%** (Table a.11).

**Table a.11. Percentage increase in the level of the ITTP due to the ban on menthol cigarettes.**

Source: Transcrime elaboration on Euromonitor International (2013a) data

	2012	2013	2014	2015	2016	2017
<b>Austria</b>	2.47	2.47	2.53	2.53	2.59	2.53
<b>Belgium</b>	0.42	0.42	0.21	0.21	0.21	0.21
<b>Bulgaria</b>	15.41	15.84	16.16	16.32	16.37	16.54
<b>Czech Republic</b>	10.47	10.85	11.10	11.47	11.85	12.10
<b>Denmark</b>	8.95	9.22	9.76	10.04	10.31	10.58
<b>Estonia</b>	14.74	14.74	14.74	14.59	14.44	14.29
<b>Finland</b>	0.30	0.30	0.30	0.30	0.30	0.30
<b>France</b>	0.32	0.32	0.35	0.37	0.37	0.37
<b>Germany</b>	0.16	0.15	0.14	0.14	0.13	0.12
<b>Greece</b>	30.27	23.06	19.60	16.43	14.41	10.95
<b>Hungary</b>	35.50	36.68	37.57	22.48	0.59	0.59
<b>Ireland</b>	0.72	0.72	0.72	0.84	0.84	0.84
<b>Italy</b>	25.86	26.20	26.20	26.55	26.55	26.55
<b>Latvia</b>	17.82	18.49	19.83	20.84	21.18	4.54
<b>Lithuania</b>	42.48	44.68	47.24	57.13	62.62	63.72
<b>Netherlands</b>	0.53	0.57	0.65	0.73	0.77	0.85
<b>Poland</b>	47.89	49.57	49.57	51.48	51.48	51.48
<b>Portugal</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Romania</b>	11.34	12.32	12.97	13.84	14.50	15.15
<b>Slovakia</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Slovenia</b>	2.42	2.99	3.55	4.04	4.36	4.60
<b>Spain</b>	0.03	0.05	0.05	0.05	0.05	0.05
<b>Sweden</b>	0.22	0.22	0.22	0.33	0.33	0.33
<b>UK</b>	0.32	0.32	0.32	0.32	0.40	0.40

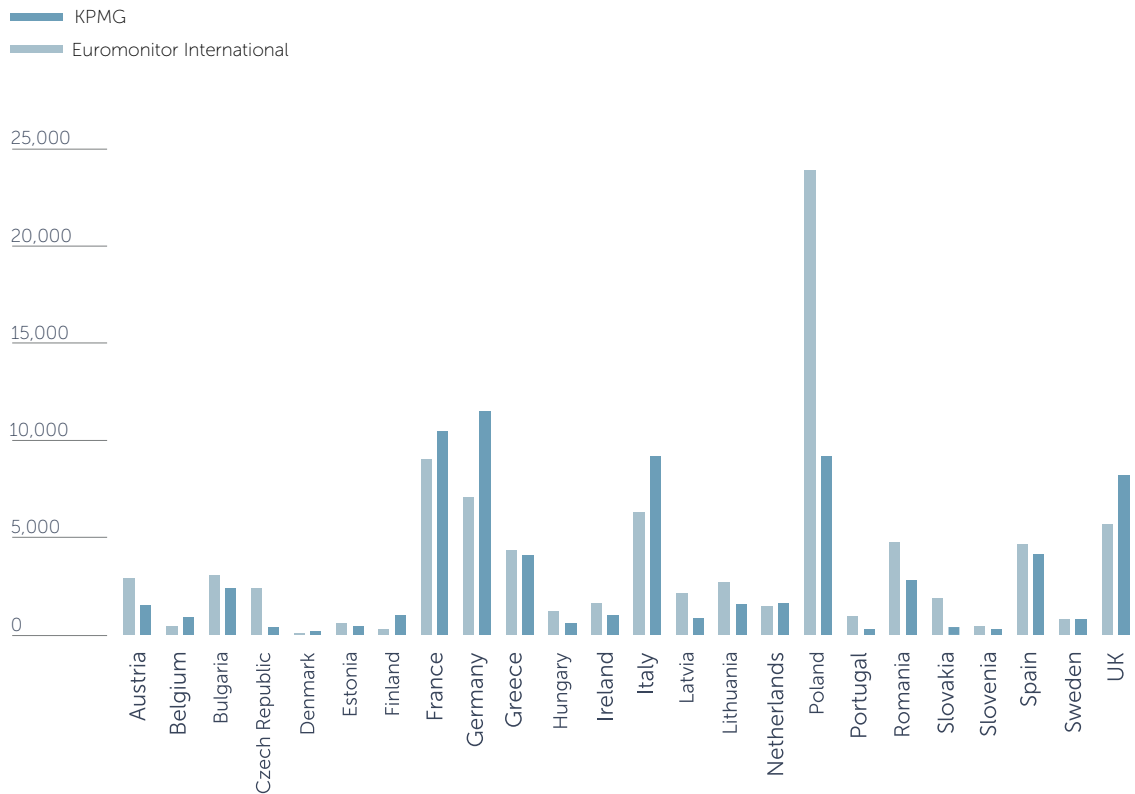
Cross-country differences are substantial. In eleven countries (Belgium, Finland, France, Germany, Ireland, the Netherlands, Portugal, Slovakia, Spain, Sweden, the UK) the expected growth is below 1.0.

On the other hand, in countries like Poland (+49.6 with respect to 2013 forecast), Lithuania (+44.7) and Hungary (+36.7), the increase may be massive.

Since the ITTP growth would be important in already large illicit markets also the overall level of the ITTP in the EU would significantly increase. Adopting the Euromonitor International estimate as the initial level, the growth in the level of the ITTP would be equal to 17.0, rising from 76 bn sticks to almost 90 bn sticks.

**Figure a.8. Comparison between the estimates of the ITTP after the ban on slim cigarettes in volume terms**

Source: Transcrime elaboration on Euromonitor International (2013a) and KPMG (2013) data



## Check the results

As already underlined, the overall increase in the level of the ITTP depends on the estimate of the initial volume of illicit cigarettes circulating in each market. The size of the growth would change if the relative weight of the various national markets varied.

It is possible to check the results and to understand their determinants better by using another estimate of the initial levels of the ITTP.

**Using the data of the illicit volumes in 2012 provided by KPMG, the result would be 11.2.** This would be significantly lower than the 17.0 based on the initial level of the ITTP indicated by Euromonitor International.

On comparing the increase at the national level in volume terms, it is immediately evident that, as in the case of menthol cigarettes, the difference in the estimated level of the ITTP in Poland is the main determinant of the difference in the overall estimate of the impact of the ban on slim cigarettes.

## PART 3

### *Combined effects of bans on menthol and slim cigarettes*

This section of the study **evaluates the joint effect of bans on menthol and slim cigarettes**. The research questions investigated are:

- *What is the joint effect on the level of the ITTP of banning menthol and slim cigarettes from the legal market?*
- *What is the tax loss due to the bans?*
- *What is the possible increase in the earnings from smuggling?*

#### 3.1 What is the joint effect on the level of the ITTP of the banning of menthol and slim cigarettes?

At point 5 (menthol) and at point 10 (slim), separate estimations have been made of the increases in the level of the ITTP due to the banning of menthol products and of slim cigarettes.

It was shown in previous sections that the increase in the level of the ITTP could range **between 2.86% and 5.14% as a consequence of the ban on menthol cigarettes, and between 11.15% and 16.95% because of the ban on slim cigarettes**.

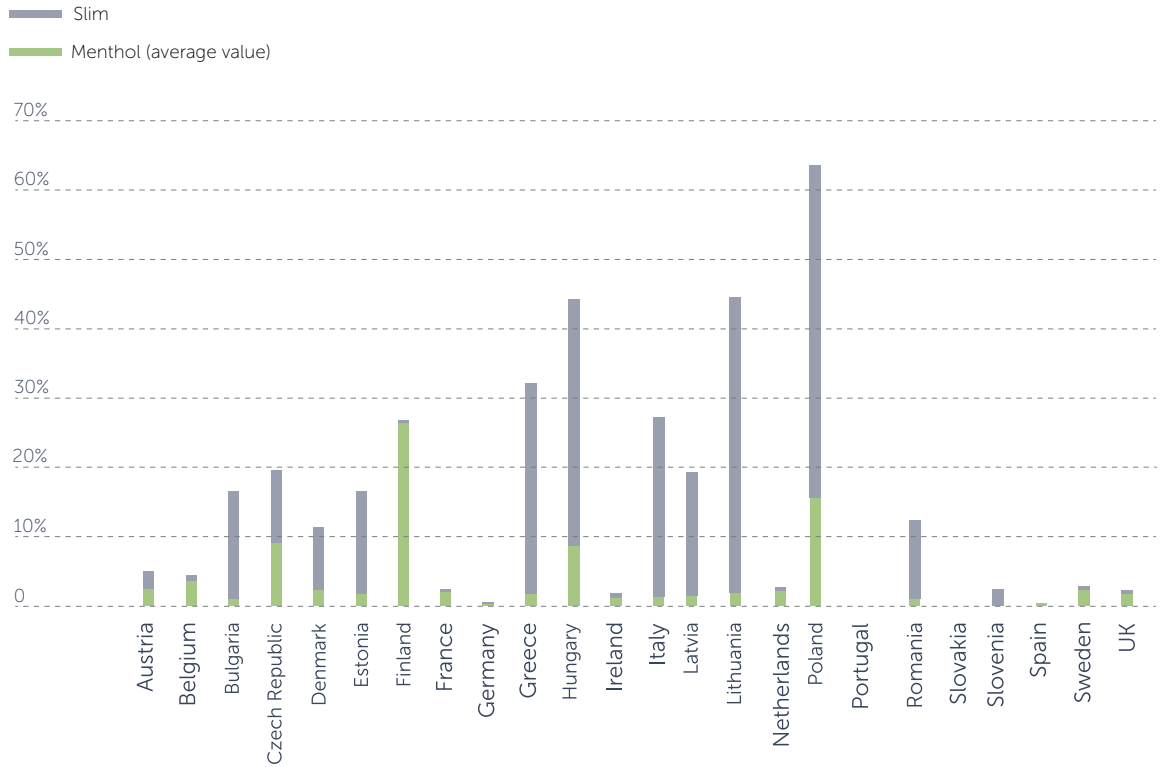
Now that the two separate estimations are available, it is possible to combine them to obtain the possible increase in the level of the ITTP in the case of a simultaneous ban on both products. On combining them, it turns out that **the total increase should be between 14.0% and 22.1%**. The two bounds originate from different estimates of the initial level of the ITTP in 2012 and of the increase in the penetration of the ITTP due to the ban of menthol cigarettes.

In most countries, the bulk of the increase would be due to the banning of slim cigarettes. Only where the total growth was below 5%, would menthol cigarettes account for more than slim cigarettes (Figure a.9). Finland is the only exception: the estimates indicate a possible growth of the Finnish black market by around 27% due almost entirely (99%) to an increase in the traffic of menthol cigarettes.

**Figure a.9. Estimated increase resulting from the combined effect of the ban of menthol and slim cigarettes**

Source: Transcrime elaboration on Euromonitor International (2013a) data

Note: the increase is calculated taking the estimate of the level of the ITTP in 2012 as the initial level. The increase in the level of the ITTP due to menthol ban represented in the graph is the average of the estimates based on the Polish and the Finnish experiments.

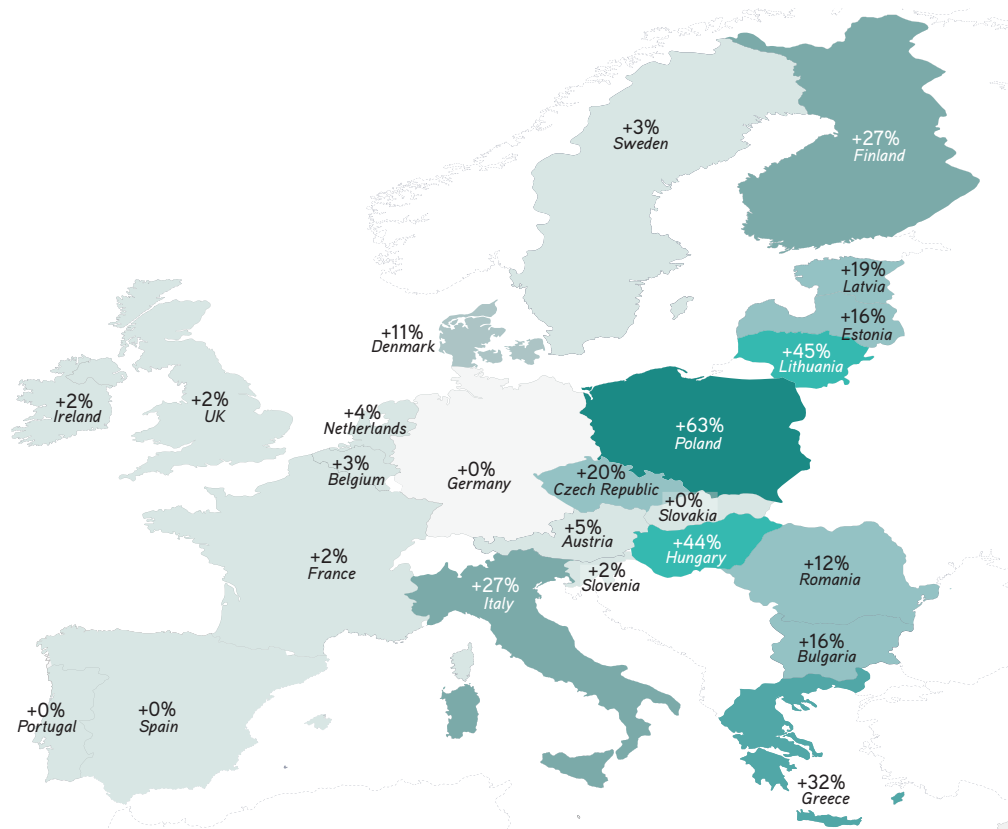


Data on the estimated growth in volumes confirm the **centrality of the Polish market in the European ITTP**. Considering all the possible combination of estimates of the initial level of the ITTP and of the increase in the illicit traffic of menthol cigarettes, Polish increase may account for a value between 40.8% and 63.2% of the entire ITTP increase in the EU. On using Euromonitor International's data and the average of the results obtained for menthol, 62.3% of the entire growth in the ITTP would take place in Poland. Poland would account for 69.2% of the European increase in the smuggling of menthol cigarettes and 60.3% of slim cigarettes (Figure a.11, p.60).

**Figure a.10. National estimated increases resulting from the combined effect of the ban of menthol and slim cigarettes**

Source: Transcrime elaboration on Euromonitor International (2013a) data

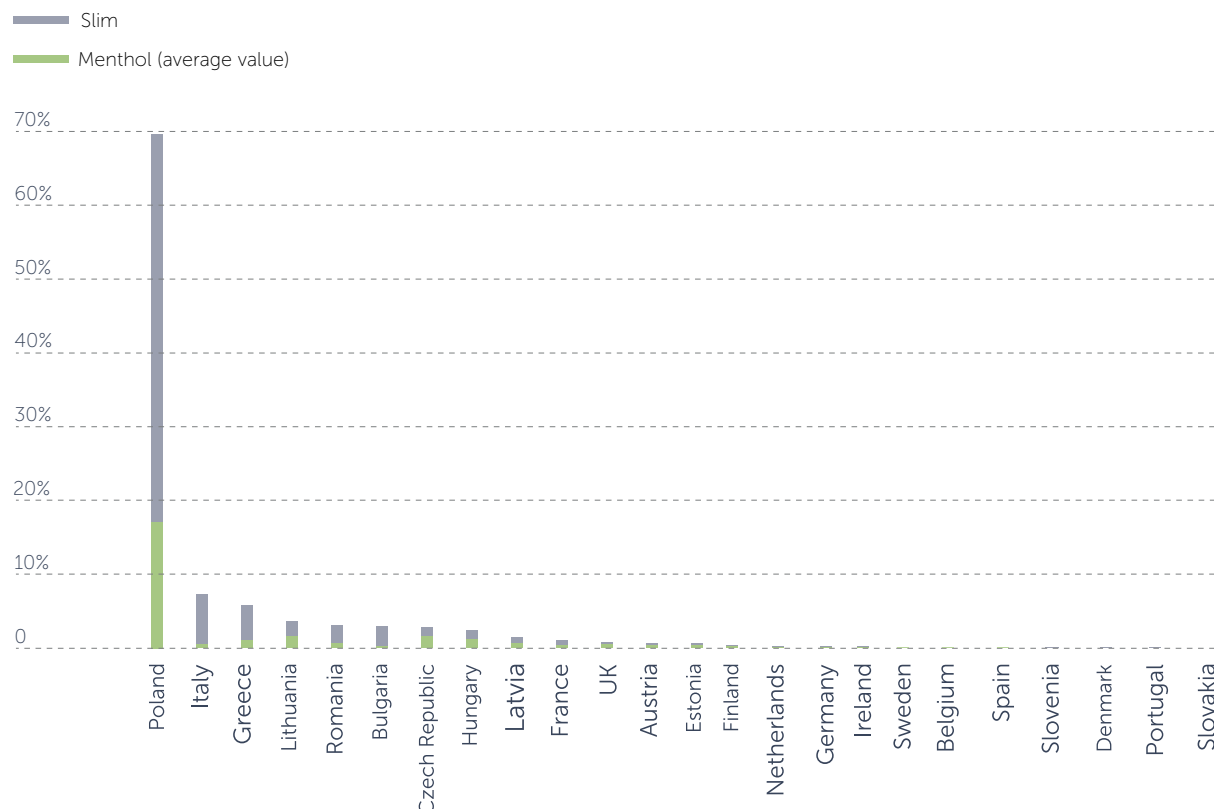
Note: the increase is calculated taking the level of the ITTP estimated by Euromonitor International for 2012 as the initial level. The increase in the level of the ITTP due to menthol ban represented in the graph is the average of the estimates based on the Polish and the Finnish experiments.



**Figure a.11. Estimated increase in the level of the ITTP in mn sticks**

Source: Transcrime elaboration on Euromonitor International (2013a) data

Note: the increase is calculated taking the level of the ITTP estimated by Euromonitor International for 2012 as the initial level. The increase in the level of the ITTP due to menthol ban represented in the graph is the average of the estimates based on the Polish and the Finnish experiments.



## 3.2 What is the tax loss due to the bans?

Having estimated the increase in the level of the ITTP in the various markets, it is possible to investigate other relevant outcomes of the banning of menthol and slim cigarettes.

One obvious **consequence of the increase in the level of the ITTP would be a tax loss for the EU Member States.**

Tax loss  $TL$ , in country  $j$ , would be the summation of the products of the tax rate on a given tobacco product ( $r_i$ ) times its legal price ( $P_i$ ) times its volume in the illicit market ( $IV_j$ ):  $TL_j = \sum r_{ij} P_{ij} IV_j$ . Since the incidence of the various brands of cigarettes in each EU illicit market is not available, it is reasonable to take the price and the taxation on the Weighted Average Price in a country.<sup>22</sup>

**Table a.12. Estimates of the tax loss due to the ban on menthol and slim cigarettes**

Source: Transcrime elaboration on Euromonitor International (2012), European Commission (2012), Philip Morris International (2012a) and KPMG (2013) data

Note: European Central Bank exchange rate at 31.12.2012 has been used to calculate the WAP of the countries outside the Eurozone.

	Total tax (incl. VAT) as of WAP in 2012	2012 WAP in Euro	Minimum increase, mn packs	Maximum increase, mn packs	Minimum increase in tax loss in mn of Euro	Maximum increase in tax loss in mn of Euro
Austria	77.15	4.0	3.3	8.1	10.2	25.2
Belgium	76.60	4.5	0.7	2.2	2.4	7.8
Bulgaria	86.65	2.4	16.8	22.1	34.4	45.3
Czech Republic	77.69	2.8	2.9	23.9	6.3	51.6
Denmark	79.22	5.1	0.4	1.0	1.7	4.1
Estonia	84.38	2.7	3.0	4.5	6.8	10.0
Finland	80.70	4.7	2.3	13.5	8.9	51.5
France	80.64	6.0	8.4	15.2	41.0	74.0
Germany	77.10	4.7	1.6	3.6	5.7	13.2
Greece	83.70	3.3	49.2	53.8	135.5	148.2
Hungary	84.76	2.4	8.8	21.0	18.1	43.2
Ireland	82.17	9.0	0.8	1.7	5.6	12.7
Italy	75.78	4.5	67.4	100.7	231.8	346.1
Latvia	82.09	2.5	6.9	17.7	14.4	36.9
Lithuania	77.74	2.3	19.8	42.6	35.8	77.1
Netherlands	81.87	5.1	1.6	2.7	6.7	11.2
Poland	84.28	2.7	196.7	513.0	444.2	1,158.7
Portugal	80.72	3.8	0.0	0.0	0.0	0.0
Romania	83.42	2.7	15.3	27.1	34.3	60.9
Slovakia	82.52	2.7	0.0	0.0	0.0	0.0
Slovenia	77.47	3.0	0.3	0.5	0.7	1.2
Spain	79.00	4.1	0.6	1.1	1.9	3.5
Sweden	80.83	6.0	0.8	1.3	3.8	6.2
UK	82.12	8.2	4.7	10.5	31.5	70.7
<b>Total EU</b>					1,082	2,259

22. According to Article 2 of Council Directive 92/79/EEC "The weighted average retail selling price shall be calculated by reference to the total value of all cigarettes released for consumption, based on the retail selling price including all taxes, divided by the total quantity of cigarettes released for consumption" (European Commission, 2013, p.5).

At this point,  $TL_j = r_{wap,j} * WAP_j * IV_j$ . The purpose of this section, however, is to estimate the incremental tax loss due to the ban, not to estimate the total tax loss due to the ITTP. It follows that  $IT_j = r_{wap,j} * WAP_j * Ct_j$  where  $IT$  is the incremental tax loss and  $Ct$  is the total increase in the consumption of illicit cigarette due to the bans.

Taking into account 2012 data, because of the availability of KPMG's estimate of the ITTP for 2012, it turns out that **the total tax loss due to the banning of menthol and slim cigarettes may vary between €1bn and more than €2bn.**

### 3.3 What is the possible increase in the earnings from smuggling?

This stage of the inquiry **estimates what would be the increase in the earning of smugglers due to the ban.**

The available data allow estimation of the possible increase in earnings of individual smugglers or street vendors, but they do not permit calculation of the earnings of organised groups active in the ITTP. However, even if there are widespread allegations that organised crime groups are involved in the ITTP (Griffiths, 2004), most of the criminological literature argues that **the majority of types of ITTP can be run by individuals** (Shen, Antonopoulos, & Von Lampe, 2010; Von Lampe, 2011; Hobbs, 2013).

#### The earnings per pack

The earning per pack is the difference between the illicit price of a pack of cigarettes on the black market and the costs sustained by the seller in his/her illegal business.

Philip Morris international investigated the price of illicit products available in European cities across the EU Member States in December 2011 (Philip Morris International, 2012b). The dataset does not include prices for Estonia and for Finland. The Estonian figure is taken from *Organized Crime: Policing Illegal Business Entrepreneurialism* and refers to 2007 (Dean & Gottschalk, 2010). The figure on the average illicit market price in Finland refers to 2012, and it has been taken from a web forum (Majjala, 2012).

#### The cost of the illicit cigarettes to the dealer

Street vendors sustain costs in purchasing illicit tobacco products. The data on costs and prices used to calculate the cost share are taken from an Italian study (Mantovano, 2001). According to this study, in Italy in the 1990s, it was possible to purchase illicit tobacco products on the illegal market at prices varying from a minimum of €23.2 (45,000 Lire) to a maximum of €40.3 (78,000 Lire) per kg (Mantovano, 2001).

Since the average prices for a legal (around €142.0) and an illegal (around €77.5) kg of tobacco in Italy in the 1990s is known, it is possible to estimate the costs of street dealers as a percentage of the legal price and as a percentage of the illicit price (Mantovano, 2001).

The two purchasing bounds give origin to four possible outcomes. Costs can be equal to 16% of the legal price, 28% of the legal price, 30% of the illicit price, 45% of the illicit price.



## Illicit earnings per pack

Assuming that EU tobacco street vendors today have the same share of costs that Italian street vendors had in the 1990s, it is possible to estimate the increase in the earnings of tobacco smugglers due to the bans.

Except for Estonia and Finland, data on illegal prices refer to 2011. For this reason, in each country legal prices refer to the same year. WAP has been taken as the indicator of legal prices. The average illicit market price is an average of the prices of various brands of cigarettes in each country.

Earnings per pack in a  $j$  country ( $E_j$ ) are equal to the price of cigarettes on the black market in country  $IP_j$  minus the legal price of cigarettes in country  $j$  ( $LP_j$ ) times the estimated share of costs relative to the legal prices (16% or 28%).  
 $E_j = IP_j - (LP_j * c_l)$  (Table a.13).

Alternatively, it is equal to the price of cigarettes on the black market in a  $j$  country ( $IP_j$ ) minus the legal price of cigarettes in country  $j$  ( $LP_j$ ) times the estimated share of costs relative to the illicit prices (30% or 45%).  
 $E_j = IP_j - (IP_j * c_i)$  (Table a.13).

**Table a.13. Estimated illicit earnings, € per pack of cigarettes**

Source: Transcrime elaboration on European Commission (2012d) and Philip Morris International (2012a) data

Note: European Central Bank exchange rate at 31.12.2011 has been used to calculate the WAP of the countries outside the Eurozone.

	Illicit Price in 2011	WAP in 2011	Minimum Earnings per pack	Maximum earnings per pack
Austria	2.0	3.9	0.9	1.4
Belgium	3.1	4.4	1.7	2.4
Bulgaria	1.8	2.4	1.0	1.4
Czech Republic	1.6	2.6	0.9	1.2
Denmark	2.6	4.7	1.3	1.8
Estonia	1.1	2.5	0.3	0.7
Finland	2.3	4.5	1.0	1.6
France	3.4	5.7	1.8	2.4
Germany	2.2	4.4	0.9	1.5
Greece	1.5	3.2	0.6	1.1
Hungary	2.6	1.8	1.4	2.3
Ireland	4.7	8.5	2.3	3.3
Italy	2.3	4.3	1.1	1.6
Latvia	1.2	2.4	0.6	0.9
Lithuania	1.4	2.2	0.7	1.0
Netherlands	2.7	4.8	1.3	1.9
Poland	1.8	2.3	1.0	1.4
Portugal	2.9	3.7	1.6	2.3
Romania	1.8	2.6	1.0	1.4
Slovakia	1.9	2.6	1.1	1.5
Slovenia	1.9	2.8	1.0	1.4
Spain	2.6	3.8	1.5	2.0
Sweden	3.0	5.1	1.5	2.1
UK	3.9	7.3	1.9	2.8

## Estimated increase in total earnings coming from the ITTP

Having obtained the earnings per pack, by multiplying these results by the expected increase in the volumes of the ITTP, it is possible to forecast the total increase in earnings due to the bans.

As in previous estimates, by exploiting Euromonitor International and KPMG's estimates and crossing them with the two estimates of the increase of the ITTP due to the ban of menthol cigarettes, it is possible to obtain an upper and a lower bound of the increase.

In addition to that of Poland, the attractiveness of the Italian, Hungarian, Greece and Romanian markets would significantly increase (Table a.14).

**Table a.14. Estimated increase in the ITTP revenues**

Source: Transcrime elaboration on Euromonitor International (2012, 2013a), European Commission (2012), Philip Morris International (2012a) and KPMG (2013) data

Note: European Central Bank exchange rate at 31.12.2012 has been used to calculate the WAP of the countries outside the Eurozone.

	Minimum			Maximum		
	Increase in the ITTP, mn packs	Earnings per pack in Euro	Increase in total earnings in mn Euro	Increase in the ITTP, mn packs	Earnings per pack in Euro	Increase in total earnings in mn Euro
<b>Austria</b>	3.27	0.89	2.93	8.06	1.40	11.29
<b>Belgium</b>	0.70	1.70	1.18	2.25	2.38	5.35
<b>Bulgaria</b>	16.83	0.97	16.39	22.14	1.39	30.84
<b>Czech Republic</b>	2.93	0.90	2.63	23.89	1.21	28.96
<b>Denmark</b>	0.43	1.25	0.53	1.01	1.82	1.84
<b>Estonia</b>	3.04	0.35	1.06	4.47	0.74	3.28
<b>Finland</b>	2.33	0.99	2.30	13.49	1.58	21.25
<b>France</b>	8.44	1.76	14.82	15.24	2.44	37.20
<b>Germany</b>	1.55	0.93	1.45	3.64	1.52	5.54
<b>Greece</b>	49.22	0.62	30.28	53.80	1.05	56.50
<b>Hungary</b>	8.82	1.43	12.61	21.04	2.31	48.61
<b>Ireland</b>	0.76	2.27	1.73	1.72	3.29	5.67
<b>Italy</b>	67.45	1.12	75.38	100.69	1.63	164.22
<b>Latvia</b>	6.88	0.57	3.92	17.71	0.86	15.29
<b>Lithuania</b>	19.78	0.73	14.41	42.59	0.99	42.37
<b>Netherlands</b>	1.61	1.35	2.17	2.71	1.92	5.21
<b>Poland</b>	196.66	0.99	194.69	513.01	1.44	738.73
<b>Portugal</b>	0.00	1.58	0.00	0.00	2.28	0.00
<b>Romania</b>	15.28	1.00	15.34	27.14	1.41	38.16
<b>Slovakia</b>	0.00	1.06	0.00	0.00	1.52	0.00
<b>Slovenia</b>	0.30	1.05	0.32	0.53	1.45	0.77
<b>Spain</b>	0.60	1.45	0.87	1.10	2.04	2.24
<b>Sweden</b>	0.79	1.53	1.21	1.28	2.14	2.75
<b>UK</b>	4.68	1.87	8.75	10.49	2.75	28.87
<b>Total EU</b>	412.34		404.96	888.01		1,294.95

# Results

The results of the study show that:

- As consequence of the banning of menthol and slim cigarettes, the increase in the level of the ITTP at the EU level could range between **14.0% and 22.1%**.
- **The banning of slim cigarettes is likely to cause a larger increase** (between 11.2% and 17.0%) **in the ITTP** than the banning of menthol products (between 2.9% and 5.1%).
- The bans are likely to hit EU member states disproportionately. The ITTP would grow more in eastern European countries.
- **Poland would be by far the most affected market.** The Polish increase may account for a value between 40.8% and 63.2% of the entire ITTP increase in the EU.
- The incremental tax loss due to the bans is expected to range from €1 bn to more than €2 bn.

The present study demonstrates that further research and more accurate data would enable better assessment of the various components of the ITTP and their evolutions. Considering the limited number of previous studies and the lack of data, the results of this study are provisional. They offer a first estimate of the possible impacts of banning menthol and slim cigarettes on the level of the TTP in the EU, and they show that more research is needed in this field.



# ABBREVIATIONS

**FCTC** Framework Convention on Tobacco Control

**FMC** Factory Manufactured Cigarettes

**ITTP** Illicit Trade in Tobacco Products

**MS** Member State

**NCP** Nicotine-Containing Products

**RYO** Roll-Your-Own tobacco

**STP** Smokeless Tobacco Products

**TPD** Tobacco Products Directive

**WHO** World Health Organisation

# GLOSSARY OF TERMS<sup>23</sup>

**Additive** – substance contained in a tobacco product, its unit packet, or its external packaging with the exception of tobacco leaves and other natural or unprocessed parts of tobacco plants.

**Characterising flavour** – a distinguishable aroma or taste other than tobacco, resulting from an additive or combination of additives, including but not limited to fruit, spices, herbs, alcohol, candy, menthol or vanilla observable before or upon intended use of the tobacco product.

**‘Cheap whites / illicit whites’** – cigarettes produced (often legitimately) in their country of origin at very low cost, to be then illicitly sold in other jurisdictions without respecting the legal requirements in the jurisdiction of destination.

**Chewing tobacco** – a smokeless tobacco product exclusively designed for chewing.

**Cigarette** – a roll of tobacco consumed via a combustion process and further defined in Article 3(1) of Council Directive 2011/64/EU.

**Cigarillo** – a small type of cigar with a diameter of up to 8 mm.

**Contraband** – products which have been diverted into illicit trade without respecting the legal requirements in the jurisdiction of destination.

**Counterfeit** – brand-protected products, which have been falsified without consent of the brand owner and do not respect the legal requirements in the jurisdiction of destination.

**Factory manufactured cigarette (FMC)** – a cigarette produced by a tobacco manufacturer capable of being smoked as such.

**FCTC commitments** – political commitments to implement the non-binding guidelines developed under the FCTC to assist Parties in meeting their implementation obligations under the FCTC.

23. See (European Commission, 2012a).

**FCTC obligations** – obligations to implement the legally binding FCTC and the Illicit Trade Protocol.

**Flavouring** – an additive that imparts aroma and/or taste.

**Herbal products for smoking** – products based on plants or herbs which contain no tobacco and are consumed via a combustion process.

**Ingredient** – an additive, tobacco (leaves and other natural, processed or unprocessed parts of tobacco plants including expanded and reconstituted tobacco), as well as any substance present in a finished tobacco product including paper, filter, inks, capsules and adhesives.

**Illicit trade** – any practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase, including any practice or conduct intended to facilitate such activity.

**Nasal tobacco** – a smokeless tobacco product consumed via the nose.

**Nicotine containing products (NCP)** – products usable by final consumers via inhalation, ingestion or in other forms, and to which nicotine is either added during the manufacturing process or self-administered by the user before or during consumption.

**Novel tobacco product** – a tobacco product other than a cigarette, roll-your-own tobacco, pipe tobacco, water-pipe tobacco, cigar, cigarillo, chewing tobacco, nasal tobacco or tobacco for oral use placed on the market after entry into force of the Directive.

**Pipe tobacco** – tobacco consumed via a combustion process and exclusively designed for the purpose of being used in a pipe.

**Plain packaging** – full standardisation of packages, including brand and product names printed in a mandated size, font and colour on a given place of the package; standardised package colour; standardised size and appearance of the package; display of required (textual and pictorial) health warnings and other legally mandated product information, such as tax-paid stamps and marking for traceability and security purposes.

**Promotional/Misleading element** – any element promoting a tobacco product by a means that is false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions, any element suggesting that a tobacco product is less harmful than others or has vitalising, energetic or other positive health effects, any element referring to flavour or taste or the absence thereof, or any elements resembling a food product. Such elements can take the form (but are not limited to) texts, signs, pictures or other graphical elements, references to natural or biological characteristics or to certain flavours or flavourings or other additives, inserts and other additional material, e.g. adhesive labels, stickers, onserts, scratch-offs, sleeves.

**Roll-your own tobacco (RYO)** – tobacco which can be used to make cigarettes by final consumers or retail outlets.

**Smokeless tobacco products (STP)** – tobacco products not involving a combustion process, including tobacco for oral use.

**Tobacco for oral use/oral tobacco** – all products for oral use, except those intended to be inhaled or chewed, made wholly or partly of tobacco, in powder or in particulate form or in any combination of those forms, particularly those presented in sachet portions or porous sachets.

**Traditional use** – continuous use of a smokeless tobacco product in a Member State or part thereof for at least 30 years.

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## *Does the new EU Tobacco Products Directive Impact on the Illicit Trade in Tobacco Products?*

### **A New Report on Crime Proofing of the New Tobacco Products Directive by Transcrime**

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The crime proofing of legislation is a scientific approach developed by Transcrime in 2006. The core idea is that the legislation may produce unintended opportunities for crime, thereby having potential criminogenic effects. Namely, tobacco regulation may create unintended criminal opportunities for the illicit trade in tobacco products (ITTP).

The impact assessment released by the EU Commission in December 2012 denies that the new Tobacco Products Directive (TPD) may affect the ITTP. Following their impact assessment the EU Commission declared that the policies proposed do not lead to an increase of the illicit trade.

This statement is an a priori assumption that excludes the area of crime from the impact assessment carried out by the Commission. This is a serious flaw which may compromise the validity of the results of the impact assessment itself and which does not comply with the EU's official impact assessment guidelines. This relevant omission does not allow the EU Commission to know whether the revision of the TPD has an impact on crime. Besides that, there are also some improvements to the current regulation. Intervening in cross-border distance sales and in traceability and security features may reduce the opportunities for ITTP crimes.

Nevertheless, the crime proofing exercise conducted in this study highlighted that a ban on slim and menthol cigarettes carry significant risks of creating unintended opportunities for the illicit trade in tobacco products.

Notwithstanding limitations of existing data and research, the assessment on menthol and slim bans suggests that:

- The menthol ban may increase the level of the ITTP in Europe by between 2.9% and 5.1%.
- The slim ban may increase the level of the ITTP in Europe by between 11.2% and 17.0%.
- Combining them, the total ITTP increase in Europe may be between 14.0% and 22.1%.
- The yearly-expected extra profits for ITTP perpetrators can be estimated at between € 0.4 and €1.3 billion (for both menthol and slim cigarettes).
- EU Member States may lose yearly tax revenues amounting to between €1 and more than €2 billion due to the illicit sales of menthol and slims.
- Eastern countries and Poland in particular may suffer disproportionate costs compared to other EU Member States.
- Poland would be by far the most affected market. The Polish increase in ITTP may account for a value between 40.8% and 63.2% of the entire ITTP increase of the EU.
- According to the study estimates, the banning of menthol and slim cigarettes would generate between 8.2 and 17.8 billion extra illicit cigarettes per year.
- The study estimates that a menthol and a slim ban may seriously impact on the European legitimate tobacco market with an ITTP growth between 17% and 22%.

Conclusions:

- The effects of a sudden ban and its impact on the ITTP crime could be especially serious in those EU countries where banned tobacco products are popular.
- The impact that some of the policies considered have on crime levels requires further and more detailed analysis.
- The European Commission should take action as soon as possible to strengthen the quality of the analysis on social impacts, which may otherwise undermine the reliability of the entire impact assessment procedure.
- The EU commission should properly apply its own impact assessment rules for determining the impact of tobacco regulation on the ITTP. Only with a complete impact assessment European Institutions, governments, and citizens will be aware of the benefits and costs of the new tobacco regulations.

