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Possible Improvement of Methodology for Estimation of the Illicit Tobacco Market

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Abstract

Objective: There is still a large illicit tobacco market in many countries, especially in Eastern Europe. There can be external and internal causes that affect illicit tobacco market: geographic factors, price differences, legislative gaps, low administrative capacity, etc. The aim of the research is to develop proposals for improvement of a methodology of estimation of illicit tobacco market. The framework of research is policy, administration and cooperation.

Methodology: The impact of illicit market can be measured as excise tax gap by using top-down methodology. However, the methodology for estimation of illicit tobacco market could be improved by reviewing health survey questionnaires and using outcome data for more detailed analysis.

Originality: The author proposes improving the scope and methodology of the health survey, so that it covers specific products as well as where those products are purchased.

Results: Data used from the survey about respondents smoking habits helps to estimate the total cigarettes smoked. In 2020, the legitimate consumption in Latvia was 2 billion cigarettes, suggesting that illicit consumption is about 200 million cigarettes as well as estimated losses of revenues were about 23 million EUR.

Practical implications: It would be advisable to introduce a regular and uniform methodology for estimation of the illicit tobacco market, using health surveys as a

basis. Further actions how to fight with the illicit market must be in place. Priorities should be set as well as appropriate actions by all parties involved.

Limitations: Estimation of the excise duty gap might be separated for each category of tobacco products. The results should be corrected for some specific factors as tobacco products legally purchased abroad or in duty free shops as well as by other deviations.

Keywords: illicit tobacco market, excise duty gap, top-down methodology, administration, cooperation

Introduction

There are significant loses from the illicit trade in goods such as cigarettes, as they are taxed with a very high excise duty burden leading to a high level of smuggling and illegal trade around the world. Smuggling is typically driven by geographical proximity to neighbouring countries where the prices of cigarettes are substantially lower, and where purchasing power, consumer tolerance, low administrative capacity and other factors drive illicit trade.

All cigarettes that are marketed illegally are produced somewhere, and any production requires equipment. By estimating the total volume of illegal markets in the European Union (EU), it is possible to determine how many illegal production sites are needed, as any manufacturing equipment has a certain capacity limit. Using this derived information, law enforcement authorities can then try to understand where production sites might be and take appropriate actions to stop illegal production. This requires international cooperation, because illegal cigarette production is organized by international criminal groups. Criminals take advantage of the fact that countries do not cooperate with each other and do not exchange information sufficiently.

In order to tackle the illicit tobacco trade, it is important to get exact data about the volume and specific details of the illicit market. Unfortunately, there are no common standards or methodologies to establish the size of an illicit tobacco market. However, the excise duty gap is regularly measured in many national tax and customs administrations, for example, in the United Kingdom (HM Revenue and Customs, 2020). It can be used as a standard measure to estimate the size of the

illicit market. This paper discusses the need for common methodologies and an agreed approach to estimation of the illegal tobacco market.

With regard to the illicit market, products other than conventional cigarettes, such as e-cigarettes, should also be considered. E-cigarettes and other new smoking products are expected to be among the fastest-growing illicit product categories in the coming years, so the question is whether these products will impact the illegal tobacco market. However, even if they reduce the consumption of conventional cigarettes, the sale of any nicotine product must be strictly controlled, including that of e-cigarettes. Therefore, the assessment of the illicit market should probe more deeply into the various product categories.

The aim of the current paper is to develop proposals for improvement of the methodology for estimating the size of an illicit tobacco market. The main tasks are to:

- analyse the existing methodologies and current practices in the estimation of the illicit tobacco market;
- review experts' recommendations and the good practices of countries in assessment of the illicit market;
- develop recommendations for complementing existing health surveys or other sources used for assessment of the illicit market.

Qualitative analysis of scientific research and regulations, and quantitative analysis of smoking prevalence, tax revenues and other relevant data were used.

Literature review

The determination of illicit market trends requires analysis of the entire market. This is influenced by both demand and supply. There are a number of factors that affect illegal markets and tax evasion. The main examples are tax burdens, tax penalties and others (Sinnasamy, Bidin & Ismail, 2015).

One of the most important taxes that most of the countries apply to tobacco products in order to increase their price and to reduce consumption is an excise duty, which also yields significant revenues. Unfortunately, in the presence of tax

evasion in many countries, it also creates a large margin between the price of ‘tax paid’ and ‘unpaid’ products (Miskam, Noor, Omar & Abd Aziz, 2013).

There are several methods of determining tax losses or so-called ‘tax gaps’. For example, to estimate a tax gap you can use a top-down method based on reconciliation of potential and actual revenue (Reckon, 2009). This method uses data that is independent of tax administrations, but from the economy as a whole (HM Revenue and Customs, 2011). The top-down method can be used to measure the excise duty gap on cigarettes and therefore to set it as a key performance indicator for further activities to reduce illicit trade and duty non-compliance (Jurušs, Šmite-Roķe & Gasūne, 2018).

Differences in tax rates in Eastern Europe are one of the factors facilitating illegal cross-border trade. For goods such as cigarettes, the difference in price is a very important factor. As a result, a country with higher taxes and prices can encounter substantial problems. The size of the illegal market may vary by geographical location, especially in national border areas, if a neighbouring country has lower taxes. For example, illegal cigarettes in Uruguay differ by geographical location. In addition, distribution is reinforced by the existence of distribution networks and weak border controls. One partial solution is tax harmonization between countries (Curti, Shang, Chaloupka & Fong, 2019).

Although estimates of illegal markets have been made, such as by project SUN (KPMG, 2014), they have been made with the support of the tobacco industry. It must be considered whether the tobacco industry manipulates such data to exaggerate the situation in the media and thereby gain support in their attempts to resist the introduction of standardized packaging or other health-focused measures. The data and claims of such studies should be treated with extreme caution (Rowell, Evans-Reeves & Gilmore, 2014). Although the SUN study is widely used as a source of data on illicit cigarette sales in Europe, the quality of data entry requires much more transparency, external verification and independent data use (Gilmore, Rowell, Gallus, Lugo, Joossens & Sims, 2014).

Quantifying the level of tax evasion on cigarettes is a challenge. The prevalence of illegal cigarettes and the extent of tax evasion vary between countries and at different times, although there is some correlation between average household

income and education levels and cigarette tax evasion (Guindon, Driezen, Chaloupka & Fong, 2014).

Empty pack survey data supported by the tobacco industry should also be treated with caution and further efforts are needed to improve the methodology of these studies. Although there are studies where empty pack survey data is accepted for lack of better alternatives – for example, on the size of the Italian illegal market – if new, independent and reliable data were more accessible, experts could integrate it into the methodology with limitations (Calderoni, 2014).

As suggested above, data and research supported by the tobacco industry may not be reliable, given that the industry stands to benefit from overstating the threat of the illicit market in countries (Stoklosa & Ross, 2014). Bulgarian experience, for example, confirms that the local tobacco industry was attempting to commission studies that exaggerate illegal trade in order to falsely convince Bulgarian politicians and public health experts that tax increases will increase cigarette smuggling (Skafida, Silver, Rechel & Gilmore, 2014). Even if governments are provided with industry estimates, they should require disclosure of all methodological information and data used to generate such estimates and seek advice from independent experts (Stoklosa & Ross, 2014).

The tobacco industry has an interest in control of any so-called 'track-and-trace' systems. In addition, the tobacco industry may use various ways – directly or through third parties – to maintain control. Governments should not use any technical solution that the tobacco industry uses or has used in the past, as it will not be compatible with the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) Protocol to eliminate illicit trade in tobacco products (World Health Organization, 2013) and will not be suitable for reducing illegal trade in legal supply chains (Gilmore, Gallagher & Rowell, 2019).

The main focus of tobacco control strategies to date has been on market supply. But it is more effective to use mixed approaches and programmes to raise awareness of the illegal market, that is, to reduce both supply and demand. This includes setting up partnerships with consumer research agencies and social marketing campaigns. Partnerships can successfully raise awareness, increase the flow of information about the illegal market, and foster development of social marketing campaigns that prevent misleading reports about the relative risk of

confronting illicit tobacco to legal (McNeill, Iringe-Koko, Bains, Bauld, Siggens & Russell, 2014).

Governments have cooperated with the tobacco industry to reduce tax evasion, including through special agreements. The best known example is one between four major multinational tobacco companies and the European Union. However, there is no comprehensive assessment of the impact of such agreements and, given the associated lack of data and secrecy, there is no evidence of their effectiveness. Such agreements are generally flawed and tax recoveries are relatively minimal compared to the financial losses caused by the illicit cigarette trade (Joossens, Gilmore, Stoklosa & Ross, 2016).

A significant challenge remains the broad range of capacities among customs and enforcement services in countries and the various regions of the world. Technical assistance to low-income countries will be needed for effective implementation of the protocol at the global level (Joossens & Raw, 2012).

In the near future, it may be necessary to monitor the export and import of raw materials (such as cigarette paper filters) to control illegal production, including undeclared production and production of cheap white cigarettes (Joossens & Raw, 2012).

Globalization and diversity of the development of the illicit tobacco trade requires a coordinated international response and the WHO-FCTC protocol is essential. Illicit tobacco trafficking is a global problem that requires a global solution (Joossens & Raw, 2012).

Quantifying tax evasion related to cigarettes is a challenge. The prevalence of illegal cigarettes and the extent of tax evasion vary between countries and at different times. There is a correlation between household income and education levels and cigarette tax evasion (Guindon, Driezen, Chaloupka & Fong, 2014).

The existence of the illegal market and its major consequences are highlighted by various studies conducted by health organizations. Among these, make use of a comprehensive measure called ‘identification of an illicit pack’ to study the extent of illicit trade [20]. This study found that overall, the proportion of illicit packs was 6.5%. The highest prevalence of illicit packs was observed in Latvia (37.8%). Moreover, it is noted in the study that it may not be the price that is the sole

determining factor for the illicit market, but the supply of illicit tobacco. The level of education of smokers is also important, especially among those living in countries bordering Belarus, Republic of Moldova, Russia Federation or Ukraine.

It must be ensured that the best available, peer-reviewed research on the illegal tobacco market is readily accessible. To this end, a respected international agency such as WHO could be entrusted with the task of pooling existing academic research to provide policy-makers with easy access to reliable information about illicit trade and its interaction with modern tobacco control measures (Fooks, Peeters & Evans-Reeves, 2014).

Research on tobacco smuggling is particularly difficult because such activities are illegal. In addition, the lack of research on tobacco smuggling in developing countries is often particularly absent. While this lack of experience is a challenge for those wishing to provide such research, it adds to the importance of their contribution. Every study on tobacco smuggling, especially those designed for individual countries, gives everyone a better understanding of these phenomena. As national studies are disseminated and analysed, measurement techniques to better understand tobacco smuggling can be improved. Ultimately, such studies could improve tobacco control policies overall (Merriman, 2013).

Various methods to measure smuggling are available, but with different limitations. In some circumstances, several different methods can be used to cross-validate estimates. Some methodological constraints can be overcome by combining approaches. As one of the methods could be used comparison of the sale of tobacco with estimated consumption of tobacco by using household surveys (Merriman, 2013).

Methodology

The EU harmonizes tax requirements, but countries do not harmonize administration. Closer alignment of the fight against the illicit tobacco trade, including methodologies for its identification, would also be beneficial. In order to avoid the use of data commissioned or produced by the tobacco industry, a health-focused survey could be conducted. As a basis for such a survey, an influential

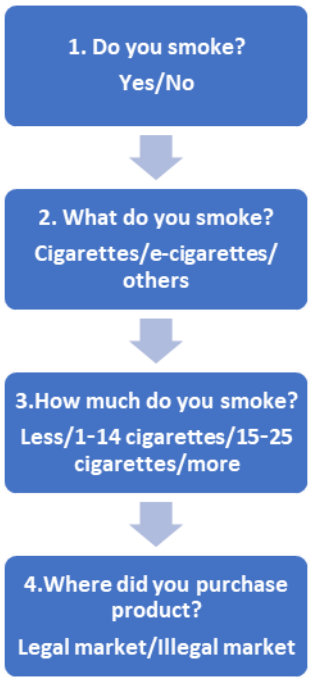
health organization (e.g. WHO) could lead the development and finalization of questions to be used, including those related to the illicit tobacco market.

One valuable source regularly used for research on tobacco control has been the European Health Interview Survey (EHIS). The main aim of the EHIS is to develop common methods and instruments for collecting information for health indicators (De Bruin, 1996). However, the EHIS lacks detailed information about where and how tobacco products were purchased. Moreover, it is not clear how regularly this survey is organized, as new data become available.

As a first step, the frequency and completeness of the EHIS should be assessed, to determine whether the results are beneficial for the analysis of the illicit market. There are no specific question in the EHIS as to whether tobacco products are legally or illegally purchased, what the reasons are that individuals purchased illegally, and exactly where and how tobacco products were purchased illegally. It would be useful to ask these questions as part of a health survey in a particular country or as the focus of a separate survey. Thus far, the primary focus of the EHIS has been the health aspects of smoking, not the tobacco market; however, it could also help to better illuminate the tobacco market and provide closer control of legal production.

Good practice has been established as part of the Survey of Health Behaviour among the Adult Population in Latvia (Pudule, Grīnberga, Velika, Gavare & Villeruša, 2013). This survey is more detailed and specific than the EHIS. However, it is limited to general smoking prevalence rather than the source of purchased products or categories of such products. Therefore, the author proposes improving the scope and methodology of the health survey, so that it covers specific products as well as where those products are purchased (see Figure 1).

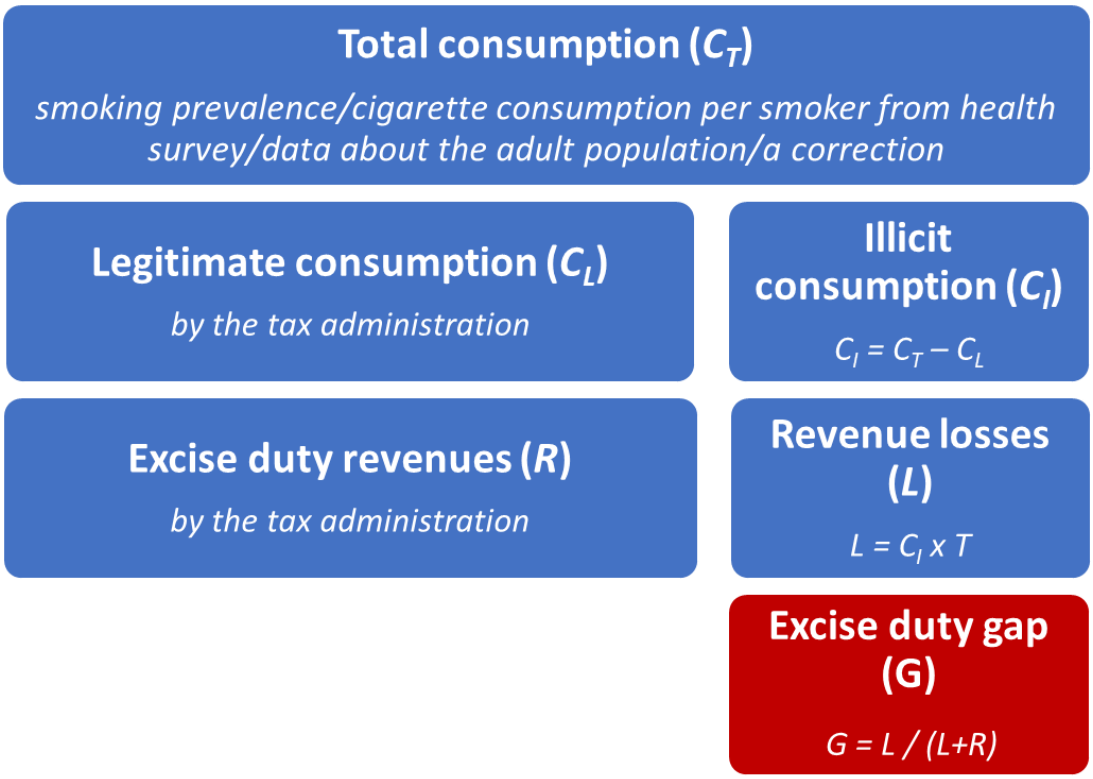
Figure 1 – Derivation of illegal tobacco market index



Based on derivation of the illegal market index, government losses and the related tax gap could be estimated by using top-down methodology. Top-down methodologies assume that the data source used to calculate tax differences covers the entire tax base. The advantage of this methodology is that it uses estimates based on data that is independent from official data (HM Revenue and Customs, 2011; Keen, 2013). An approach should be specified for estimation of the excise duty gap for each category of tobacco product. The outputs could be used for setting key performance indicator for further activities to reduce illicit trade and duty non-compliance.

A potential approach to estimation of the excise duty gap on tobacco products is outlined in Figure 2.

Figure 2 – Estimation of the excise duty gap on tobacco products



Estimation of the excise duty gap might be separated for each category of tobacco products. The results should be corrected for some specific factors as tobacco products legally purchased abroad or in duty free shops as well as by other deviations.

Results

For a case study to estimate the illicit market for cigarettes in Latvia the health survey methodology (described above) was used. Specifically, for estimation of the total amount of consumed cigarettes, the Survey of health behaviour among Latvian adult population (Pudule, Grīnberga, Velika, Gavare & Villeruša, 2013) was used, including combined sampling – a method for stratified random sampling and quotas. The sample was stratified by sex, age, place of residence, city, municipality, region and nationality. Data about the adult population was obtained from the Central Statistical Bureau (Central Statistical Bureau. 2018).

According to the survey the smoking prevalence is 38.3% among men, and 12% among women, and a total of 24.5% among all individuals over 15 years of age (Pudule, Grīnberga, Velika, Gavare & Villeruša, 2013).

Data used from the survey about respondents smoking habits helps to estimate the total cigarettes smoked: 2 billion units per year. In 2020, the legitimate consumption in Latvia was 1.80 billion cigarettes, suggesting that illicit consumption is about 200 million cigarettes as well as estimated losses of revenues were about 23 million EUR (see Table 1).

Table 1 – Annual cigarette consumption and estimated revenue losses

No	Step	Results
1	Total cigarette consumption	2.00 billion
2	Legitimate cigarettes consumption	1.80 billion
3	Illicit cigarette consumption	200 million
4	Revenues	€ 209 million
5	Revenue losses	€ 23 million

Source: By author, based on State Revenue Service data (State Revenue Service, 2018).

Discussion

Estimations of the illicit tobacco market can be used for further actions to tackle the situation. The illicit market in tobacco products is a major problem for many countries, and unfortunately for a number of years countries have failed to find effective methods (Cooper & Witt, 2012).

Tackling the illicit market is a high priority for the whole of the EU, and the European Commission regularly updates the action plans developed including a number of actions to implement including, for example, to help detect smuggling, provide installation of the latest generation of technical equipment at border checkpoints (e.g. scanners, automated identification tools and night vision equipment) (European Commission, 2015; European Commission, 2013).

One solution to improving the control of movement of tobacco is the development and implementation of a track-and-trace system (European Commission, 2014). Unfortunately, not all European countries are planning to implement the track-and-trace system yet. For example, there is no such requirement in Belarus. This means that there needs to be discussions about alternative ways to limit the illegal market. It is known that production in Belarus exceeds domestic consumption,

which means that legal production supported by government is in fact used for illegal exports to other countries. The solution could be to agree with such countries on more strict control and monitoring of their tobacco markets, and to impose a liability on manufacturers who supply bulk cigarettes outside licensed retail outlets. For example, if a large amount of non-domestic cargo is found, the manufacturer is made liable for such deviation.

Data about tobacco production, consumption, legal and illicit trade, as well as disaggregated data including prices and taxes can be obtained from Euromonitor International, which is one of the world's leading independent providers of strategic market research (Euromonitor International, 2019). Data are available for purchase. Data are also available from annual reports and from an online database, which are simultaneously updated. Although mostly directed at the tobacco industry and allied users (i.e. equity analysts), these data are also used by tobacco control researchers and advocates (Blecher, Liber, Ross & Birckmayer, 2015). However, it is not clear methodology for estimation of illicit trade by Euromonitor, therefore, the better use data from heath survey. As the results can be estimated losses of revenues or excise duty gap (Jurušs, 2017).

The effectiveness of both control approaches and recovery measures should be considered. The penalties must be adequate to change the behaviour of the non-payers (Lazăr, 2013).

In addition to customs cooperation, modern technology and equipment use, dog handler services, and training programmes, the role performance and motivation programmes of employees are also important, as are additional incentives (Jurušs, 2017).

Despite being a relatively minor component, adjustments can also be made for the amounts permitted for purchase at duty-free shops or legally imported from other countries. Although legally purchased, amounts are not always within legal limits for the country of import, particularly if the import quotas are not taken in consideration. In general, therefore, more active policies regarding restrictions of duty-free shops could be considered in some circumstances. The purpose of duty-free shops is essentially to avoid paying taxes in the case of exports. It would be logical and normal that taxes would nevertheless be payable in the country of import, that is, the country of consumption. If, however, only a certain amount

(quota) can be imported as duty-free in the country of import (consumption), then the general logic of the duty-free situation is not fully practical.

In particular, illegal cigarettes are purchased by low-income individuals, as studies show that they are less law-abiding than households with a higher income (Alm & Borders, 2014). This is typically seen more in countries with a significantly lower standard of living. As the economic situation improves, this tendency could be reduced, but we may have to wait for a very long time for that to happen.

Tax and price harmonization have the potential to reduce illegal cross-border trade. Such solutions work for countries that are in a political union, such as EU countries. If neighbouring countries are not in the same union, due to political and divergent interests and management, harmonization can be rather cumbersome. For example, in the Latvian situation, much of the illicit tobacco market consists of illegal white imports from Belarus. As Belarus plans to accede to the World Trade Organization, harmonization of tax rates for tobacco products could be negotiated, and WHO could provide supporting evidence.

Tax evasion causes loss of revenue, underreporting, illegal markets, distortion of competition, insufficient budget for government spending and other consequences. It is more difficult to tackle the consequences than with causes. It also requires resources and need for different actions. A risk management process should be applied as the key tool in mitigation of consequences. Governments should find the right balance of investments between the causes and consequences of tax evasion (Jurušs, 2017).

Conclusions

It would be advisable to introduce a regular and uniform methodology for estimation of the illicit tobacco market, using health surveys as a basis. These should be developed such that both smoking prevalence and specific product categories and volumes can be estimated, as well as the size of the illicit market and possible sources of illegal manufacturing.

More cooperation, better exchange of information, more effective law enforcement and improved tax collection will be needed to effectively combat illicit tobacco trade

and production. Eliminating illegal production sites and more effective control of legal production should reduce illegal offers.

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