



Lithuanian  
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# LITHUANIAN SHADOW ECONOMY



Periodical

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# LITHUANIAN SHADOW ECONOMY

*Compiled by Vytautas Žukauskas*

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# PREFACE

This is a publication devoted to the Lithuanian shadow economy. The shadow economy usually stays a top concern. Not only because a high level of the shadow economy signals deterioration of people's morale and the shadow economy offers fresh ground for boosting state budget revenue. The shadow economy is people's protest and an important symptom that the country's economic system performs not so well. An increasing shadow always implies inconsistency between governmental decisions and people's expectations, between taxes and regulation on the one hand and people's income level on the other, between visions born in the heads of those in power and the realistic opportunities to put them into reality.

Research shows that the shadow economy

in Lithuania represents an impressively high share of total economy. Despite the Government's aspirations for a more rigorous fight against the shadow undertaken back in 2011, there has been all but a slight decrease in levels of the shadow economy. According to our belief, a targeted drop of the shadow economy in Lithuania requires a complete picture of the shadow and of its components, and, more importantly, a precise identification of its causes and effects.

We hope this publication helps achieve a better understanding and, in addition to its benefit for decision-makers, will be interesting to the general public.

Vytautas Žukauskas

Senior expert at LFMI

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- Alcohol Traders Association
- National Tobacco Manufacturers Association
- Lithuanian Petroleum Products Traders Association

# BACKGROUND

Based on available research and on ad hoc surveys, this publication aims to identify levels of the shadow economy in Lithuania, analyse the components of the shadow with focus on excise goods, uncover the factors affecting the shadow economy and name the essential negative effects of the shadow economy.

The first part of this book provides the definition of the shadow economy, which is followed consistently in the whole publication. It then examines the principal causes of the shadow economy and the factors affecting its size.

The second part of this book offers a summary of the different institutions and analyses the general levels of the shadow economy in the European states and Lithuania.

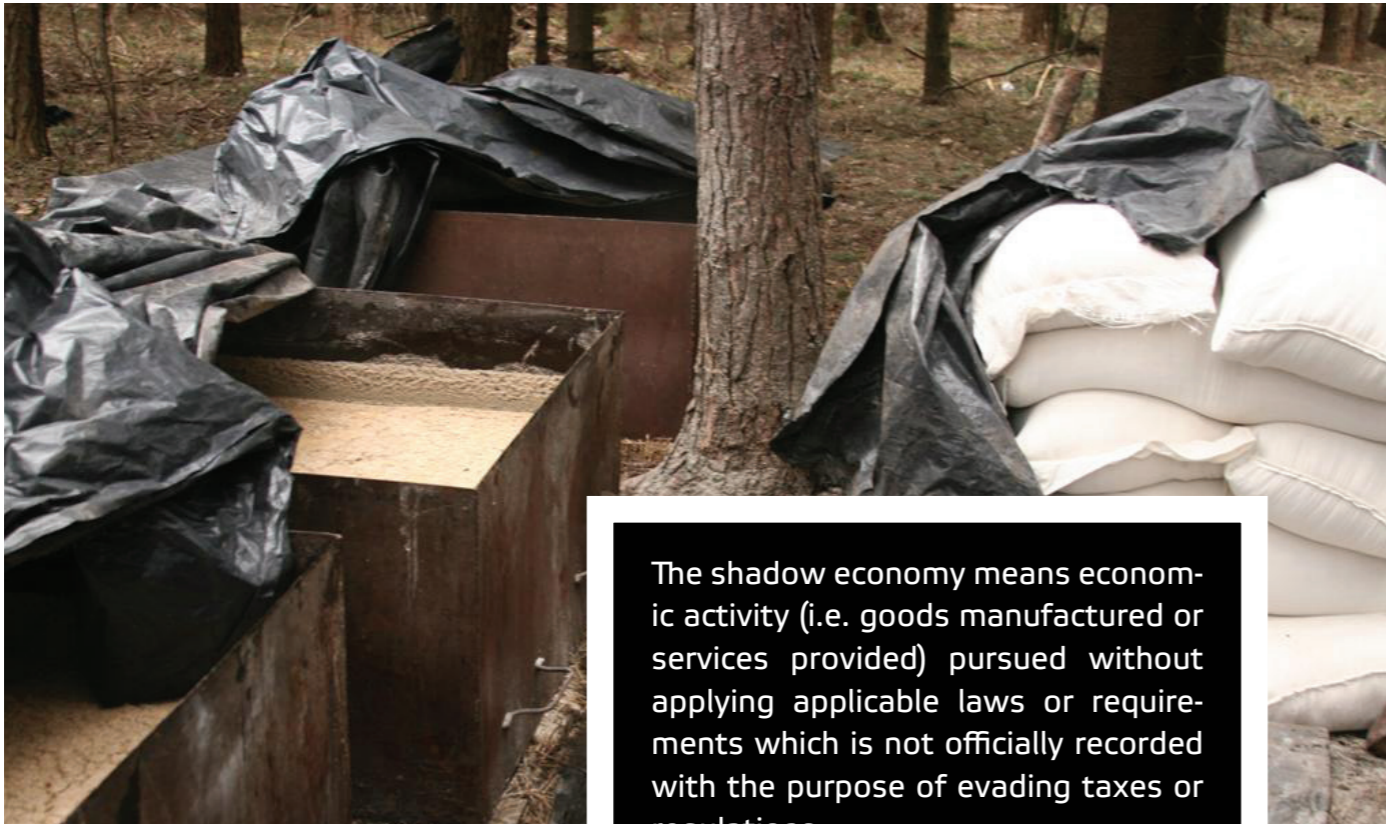
This first issue of the publication provides a deeper insight into the shadow related to groups of excise goods (fuel, alcoholic beverages and tobacco products). The third part is devoted completely to this area of the shadow economy. It provides an elaborate analysis of parts of the shadow in respect to each of the three groups of goods referred to above.

The fourth part examines the key negative effects of the shadow economy while the fifth looks at the latest top concerns in connection with the Lithuanian shadow economy.

This publication is intended for professionals within the private and public sector, decision-makers, academicians and journalists interested in the shadow economy and everyone else who wants to learn about and gain a deeper insight into the Lithuanian shadow.

According to the plan, this publication will be updated and released biannually.

# 1. WHAT IS SHADOW ECONOMY AND WHAT DOES IT DEPEND ON?



The shadow economy means economic activity (i.e. goods manufactured or services provided) pursued without applying applicable laws or requirements which is not officially recorded with the purpose of evading taxes or regulations.

## 1.1. Definition

For the purposes of this publication, the shadow economy, or simply, the shadow, means economic activity (i.e. goods manufactured or services provided) pursued without applying applicable laws or requirements which is not officially recorded with the purpose of evading taxes or regulations.

The shadow economy should not be confused with non-observed economy, which covers non-observed activities that create goods and services for the market, but is not associated solely with violating the law. It also includes

other causes of non-observation of activities (e.g. economic operators not subject to compulsory registration, companies not being examined or surveyed).

It should also be pointed out that the shadow economy excludes the illegal activities which bring financial benefits to the individual and are based not on voluntary exchange, but rather on violation of the property rights of other individuals, for instance, VAT fraud, theft, kidnapping, homicide.

## 1.2. Causes of and factors affecting the shadow economy

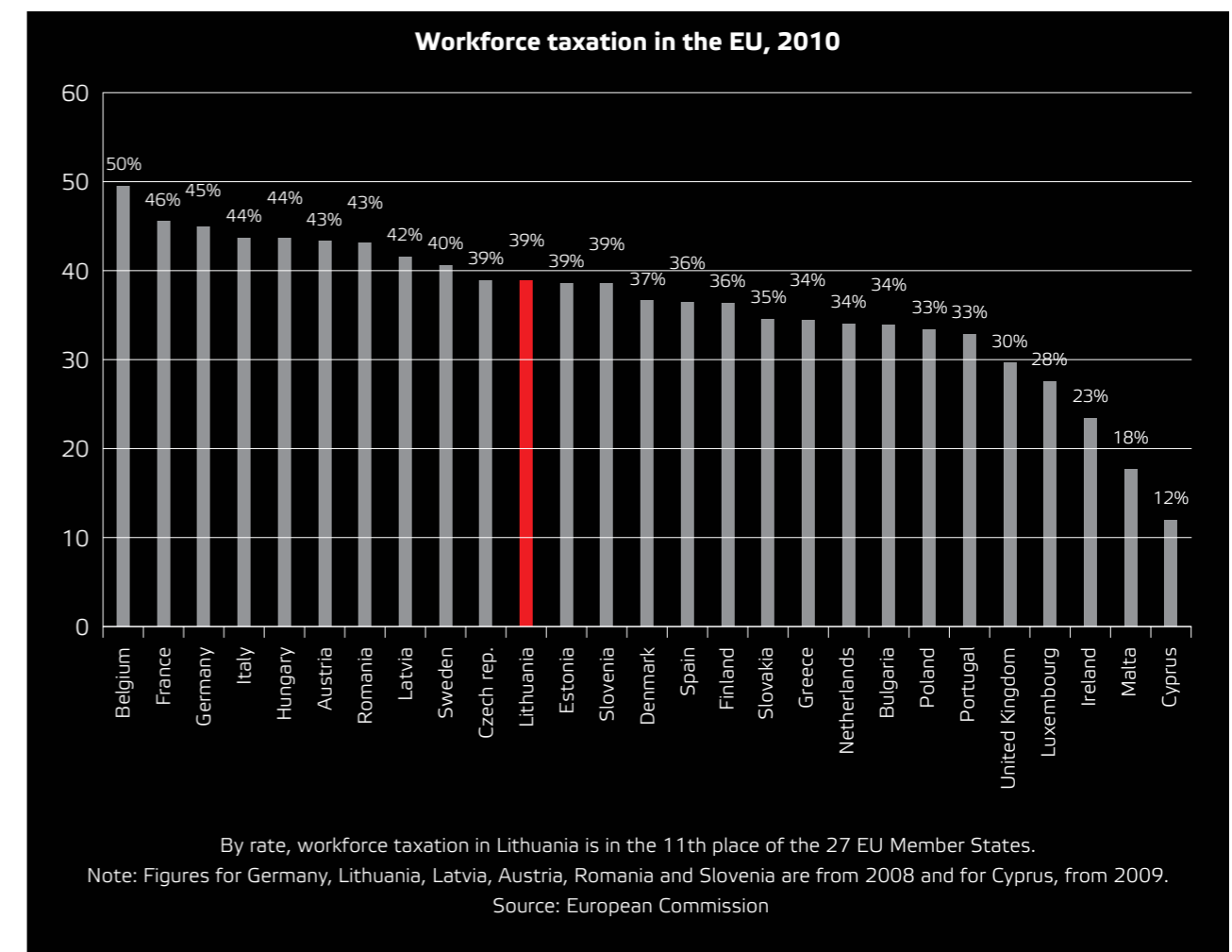
### Regulation and taxation level

The level of regulations and taxes is the principal cause of the shadow economy. The higher the taxes and the more compulsory regulations legal operators face, the higher the incentives for market players to evade regulations by retreating to the shadow. Hence from the economic point of view, taxes and their administration and the requirements and regulations imposed by public authorities may be treated as the costs of legal activity.

Illegal activity has its costs, too. These include imminent sanctions, a threat to reputation, inconveniences and expenses of trying to con-

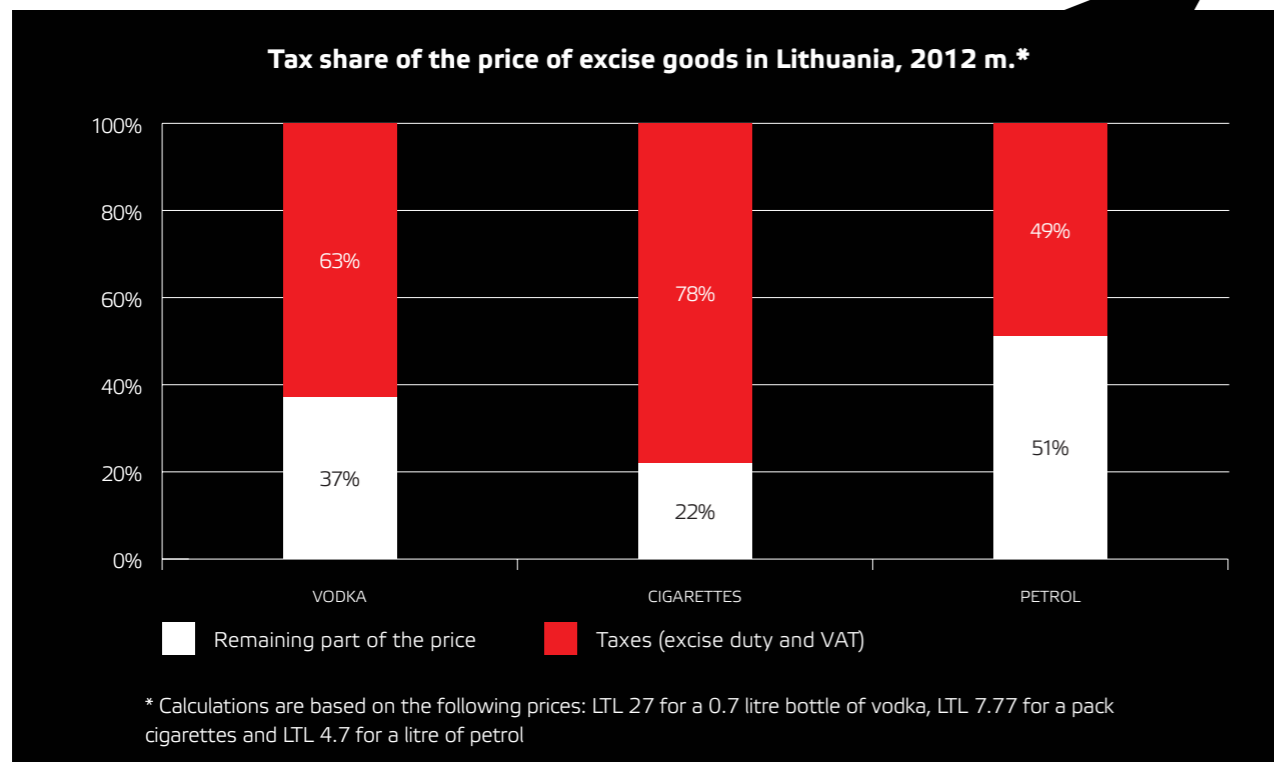
ceal the illegal activity. When the costs of legal activity that increase due to taxes and regulations substantially overtake those of illegal activity, market players get the incentive to choose a shadow activity.

This is illustrated by the existing situation on the Lithuanian labour market. The main reason why people choose a job without an employment contract is that their costs of legal activity (taxes paid) are higher than those of the illegal one (the risk of sanctions, non-existence of social guarantees).



The rate of taxation has an important impact on the shadow economy not only because taxes come as a burden to economic activity, but also because they lift the price for goods. For instance, the excise duty for cigarettes, spirits and fuel represents 78, 63 and 49 per cent respectively of the price for these goods. This price increase triggered by the excise duty creates opportunities for a profitable

shadow activity of illegally producing or importing goods from the countries that enjoy lower taxes and lower prices for those goods. Hence the shadow activity occurs from making use of the difference between the cost of production and import of goods in an illegal way and the market prices raised by the taxes imposed on legal goods.



## Economic situation, level of income and standard of living

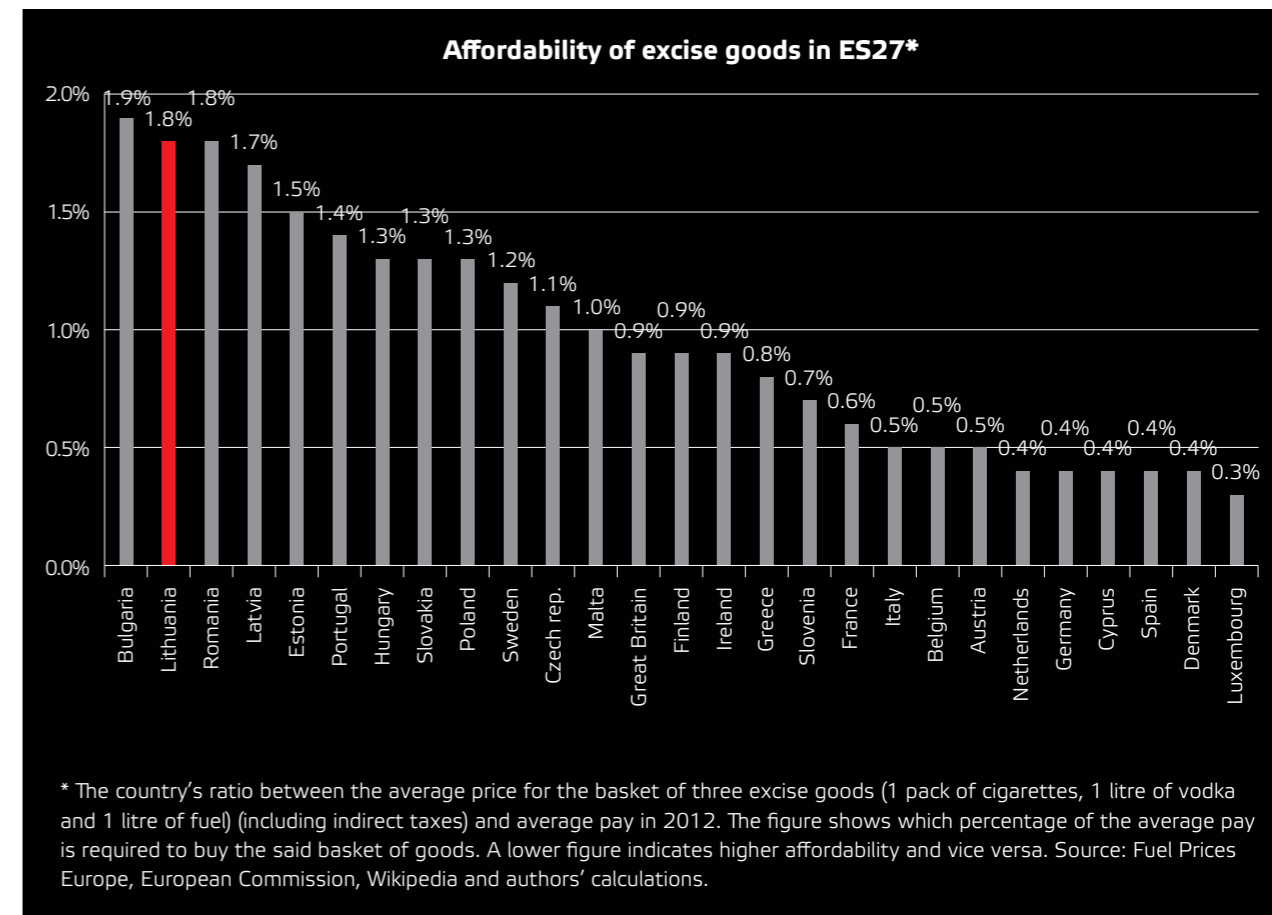
The extent to which the level of taxation and regulations affects a country's shadow economy depends on the country's economic situation and on the level of income and standard of living of its population. Regulations introduced and taxes increased during a period of economic downturn will always have a much greater impact on the growth of the shadow economy than during an economic upturn. The reason for this is that businesses and households find it much more difficult to measure out a greater part of their income or to meet the new requirements in a poor economic situation. This type of reasoning can be applied

not only to the country's changing economic situation, but also to comparisons between the countries. In countries with a lower income level, the same taxation or regulation rate has a more painful effect compared to those with high level of income and standard of living. Economic theory states that when choosing where to use their earnings people first of all choose to spend them on things they find most important and most valuable, for instance, food. The remaining part of income is spent to satisfy less important needs. This means that in countries with higher earnings of the population people satisfy more of their

less important needs compared to low-income states. Hence for a resident of a poor country with a low level of income and standard of living the same tax rate (for instance, 20 per cent) is more painful because it means giving up on his or her more important needs as opposed to the same tax rate introduced in a well-off country. This explains why taxes at identical rate have a different impact on na-

tional economies depending on their subsistence levels.

Higher taxes always mean lower affordability for goods and services. The chart below shows affordability of excise goods heavily taxed in the EU, EU27. The chart suggests that the percentage of the country's average pay spent on the basket of excise goods by



EU nationals is very diverse. Excise goods are the least affordable in Bulgaria, Lithuania and Romania. In these countries residents spend around 2 per cent of average pay on the basket of excise goods (1 pack of cigarettes, 1 litre of vodka and 1 litre of fuel). Countries like Luxembourg, Denmark, Spain, Cyprus and Germany represent the lowest share of average pay spent on the basket of excise goods. These substantial differences in affordability of excise goods are primarily conditioned by differences in income levels. A lower income level, which automatically

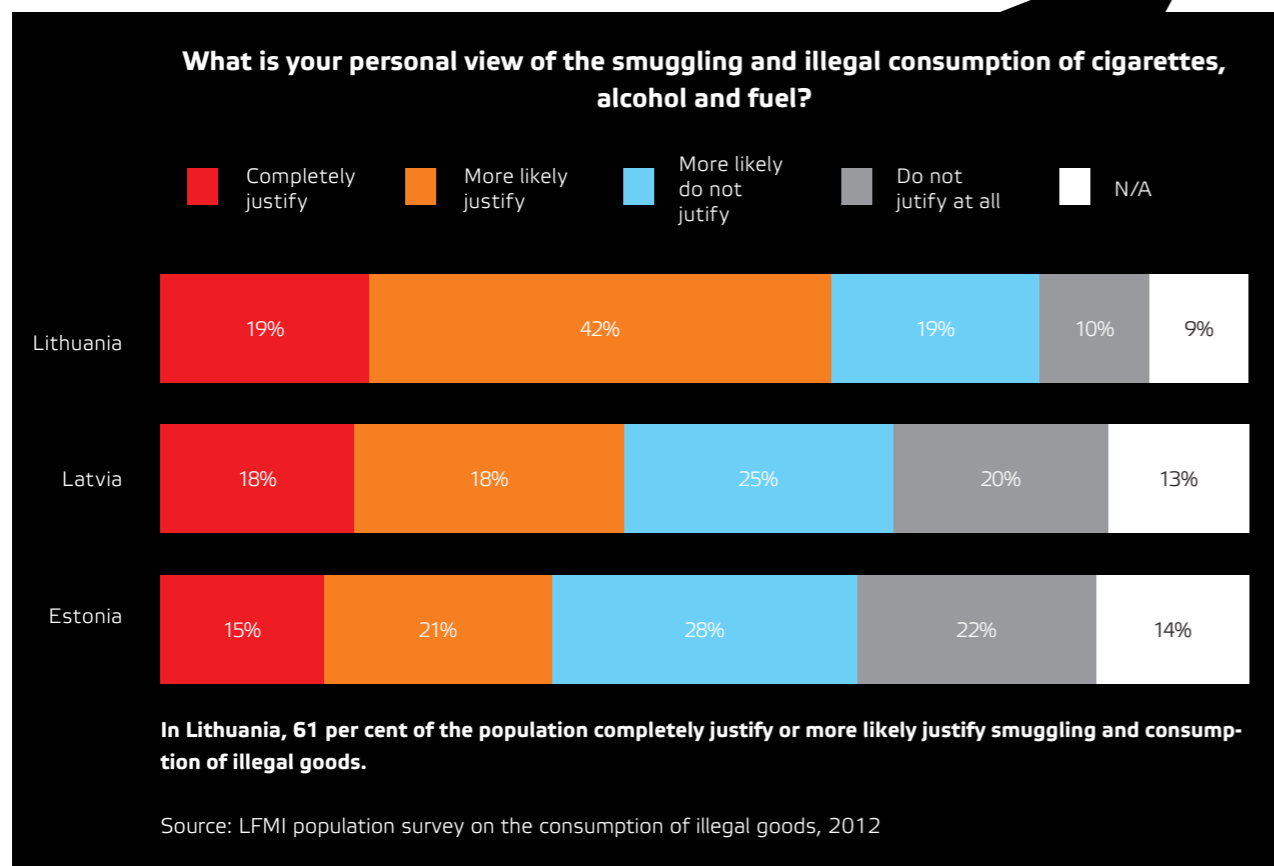
affects affordability of goods, prompts residents to reduce consumption of products and services or to look for alternatives, including cheaper products and services in the shadow economy.

**By earnings, excise goods are the least affordable in Bulgaria, Lithuania and Romania of all EU Member States.**

## Tolerance towards the shadow and trust of the population in the quality of illegal goods

A country's level of the shadow economy is affected by people's tolerance to it and trust in the quality of goods and services created within it. Owing to different cultural and historical circumstances people in different countries have different views on the activities of the shadow economy. The impact of collected taxes and of regulatory decisions on the shadow economy depends on people's level of tolerance towards the shadow. The shadow tends to spread faster where it is given excuse compared to those countries where it is condemned and rejected

as unacceptable and immoral activity. People's trust in illegal products and services is an important precondition for shadow activity. When people are particularly critical about the quality of products and services, vendors that act in the shadow are forced to cut prices to offer customers an acceptable value for money. And vice versa, a high level of trust among people enables vendors to retain relatively high prices, which makes the shadow activity more profitable and more attractive.



## Corruption level in the country

A high level of corruption in the country facilitates development of the shadow. In a corrupt environment it is simpler to bribe officials at law enforcement institutions, which makes it easier to get away after violating the law, reduces the risk and cost of the shadow activity

and improves the attractiveness of such activity. And vice versa, if the public authorities are very transparent and non-corrupt, the shadow activity is associated with higher costs and a higher level of difficulty.

## Prices in the neighbouring countries

The country's geographical location is an important factor for some sectors of the shadow economy. Smuggling, or illegal import of goods, is part of the shadow economy. Although the main cause of smuggling is the difference between the prices of the product in the country of origin and in the country of sale, the shadow activity is also strongly affected by the country's geographical location. If the country is surrounded by states where prices for specific goods are much lower (for

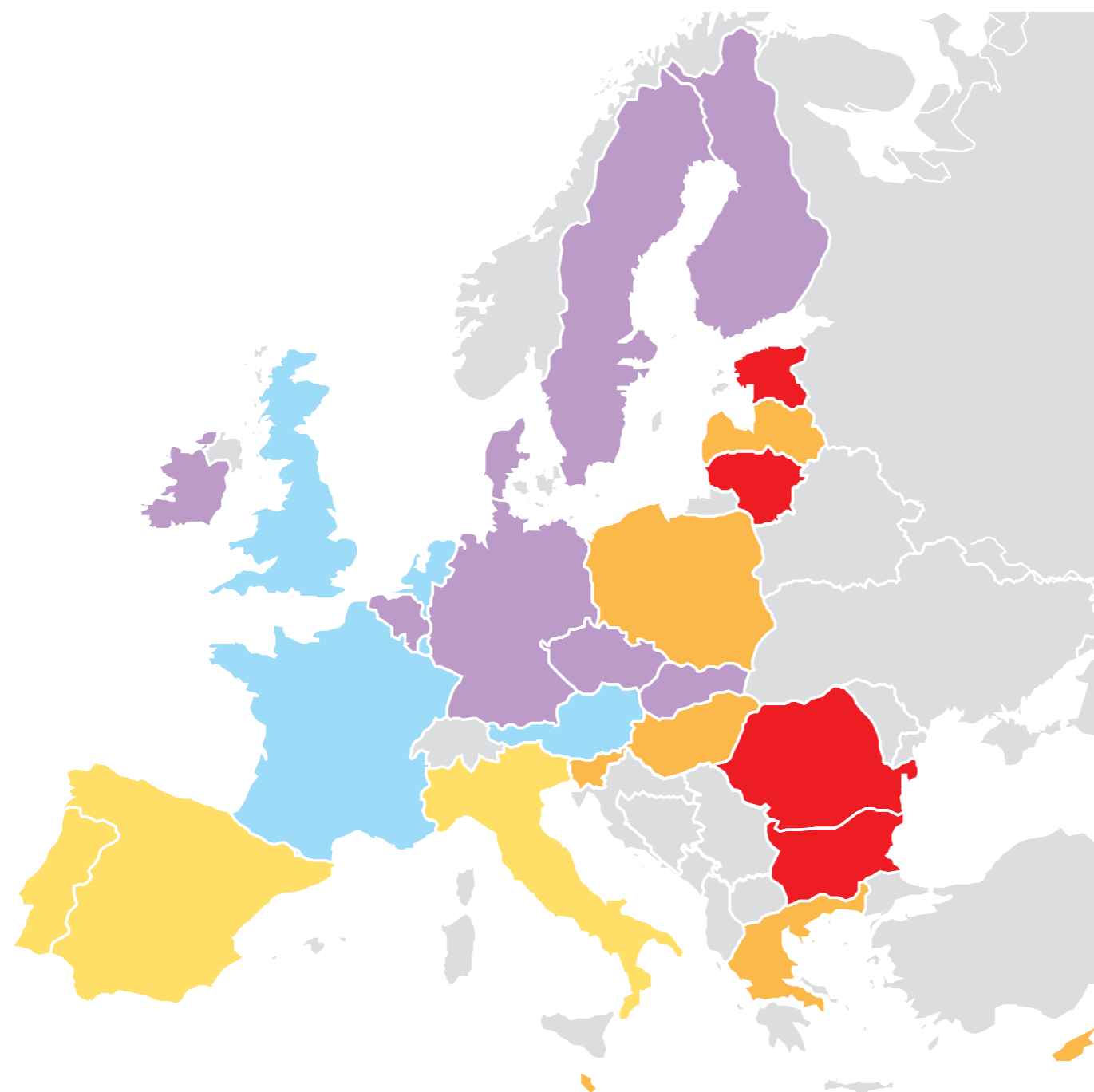
instance, due to differences in the taxation environment), it provides much more favourable conditions for the development of smuggling. As an example, Lithuania borders on countries which are not EU members and where excise duties are much lower. For this reason the problem of smuggling is much more relevant in Lithuania than in Western European countries, where excise duties are as high, but which do not border on non-EU members.

	PRICE IN LITHUANIA	IN RUSSIA (KALININGRAD DISTRICT)	IN BELARUS
0.5 litre of vodka	18 Lt*	11,9 Lt*	11,97 Lt*
1 litre of diesel fuel	4,71Lt**	2,54 Lt**	2,56 Lt**
1 pack of cigarettes	7,77 Lt***	2,07 Lt****	1 Lt****

\* Source: AGPIA  
 \*\* Sources: degalukainos.lt, www.ariscard.com (30.8.2012)  
 \*\*\* Weighted average price of cigarettes in 2012  
 \*\*\*\* Price of cigarettes which represent the highest percentage of illegal market in Lithuania (based on the Russian and Belarusian rouble exchange rate on 30 August 2012)

## 2. WHAT ARE THE LEVELS OF THE SHADOW ECONOMY IN THE WORLD AND IN LITHUANIA?

### 2.1. The shadow economy in the world



Size of the shadow economy in 31 European states in 2011 (as percentage of official GDP)

8-12 %	Austria, France, Luxembourg, Netherlands, United Kingdom
13-17 %	Belgium, Ireland, Czech Republic, Denmark, Finland, Germany, Slovakia, Sweden
18-22 %	Italy, Portugal, Spain
23-27 %	Cyprus, Greece, Hungary, Latvia, Malta, Poland, Slovenia
28-32 %	Bulgaria, Estonia, Lithuania, Romania

According to the World Bank figures, there are substantial differences in the size of the shadow economy in different states of the world. In 2010, Switzerland represented the world's smallest shadow economy with merely 8.1 per cent of the country's official GDP<sup>1</sup>. Whereas in Bolivia, which records the world's largest shadow economy, the shadow comprises 63.5 per cent of official national GDP. In 2011 in Europe the shadow economy

ranged from 7.9 per cent (Switzerland) to 32.3 per cent (Bulgaria) of official GDP<sup>2</sup>. In 2010-2011, European countries recorded a decline of the shadow market as compared with 2008. This is associated with the improving economic situation in the EU. The recovering economy limits incentives to act in the shadow. The only exception is Greece, which is still in the middle of economic downturn.

### 2.2. Assessment of the Lithuanian shadow market

Many studies that examine the shadow economy show that Lithuania experienced a vigorous growth of the shadow economy during its economic downturn.

For instance, according to the findings from the **Survey of the Lithuanian Economy** conducted by LFMI in July 2012, the share of the shadow economy in relation to GDP was growing rapidly since 2008 and accounted for as much as 28 per cent of the country's GDP in 2010 followed by a slight decrease down to 26 per cent during 2011 and 2012. The same research shows that approximately 4 out of 10 economic operators pursue at least part of their activity in the shadow in 2012.

In its calculations of the national Gross Domestic Product, **Statistics Lithuania** includes the non-observed economy. As defined in section 1.1., the essential difference between the shadow and the non-observed economy is that the latter also includes the non-observed activities which are not related to violation of the law.

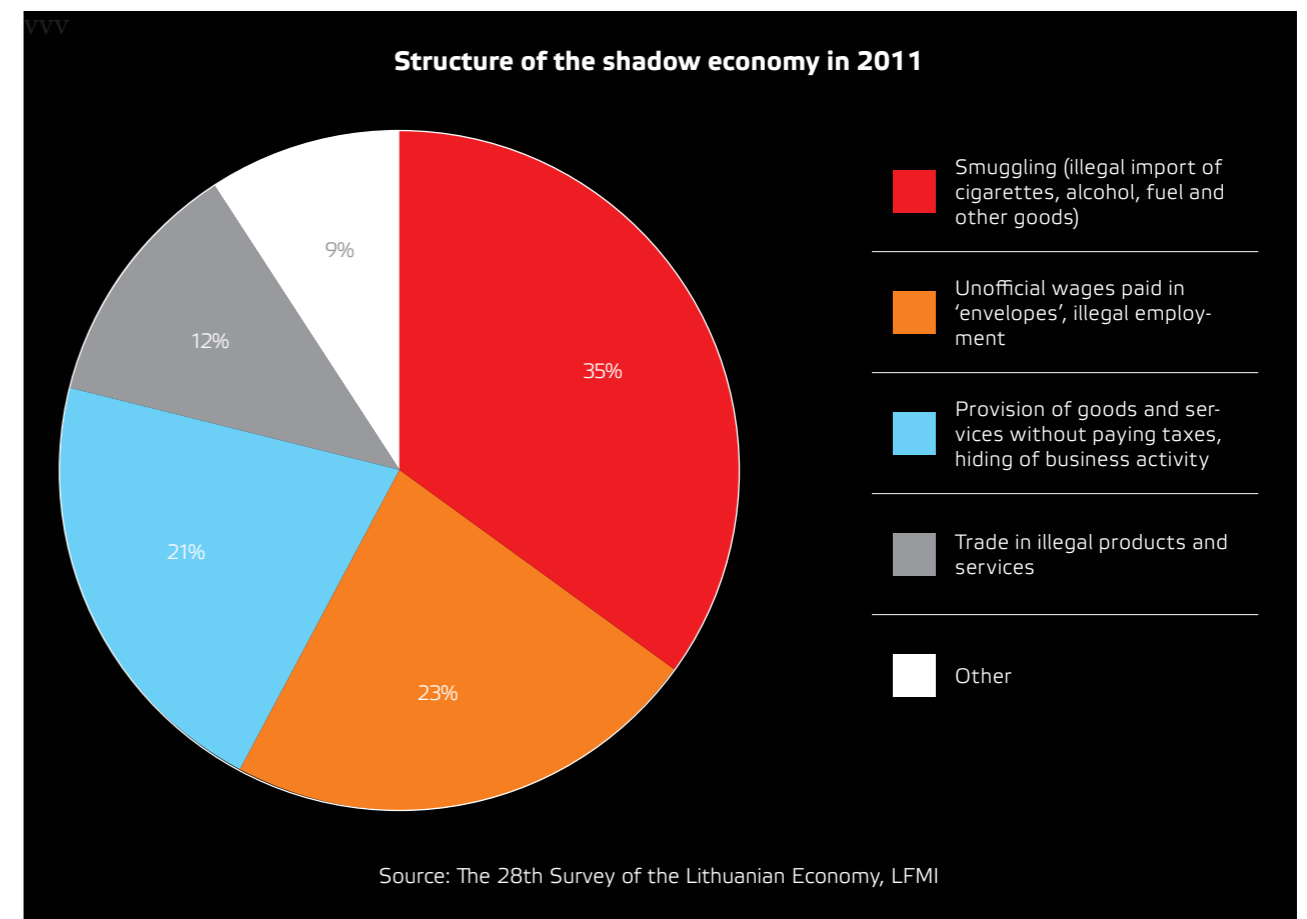
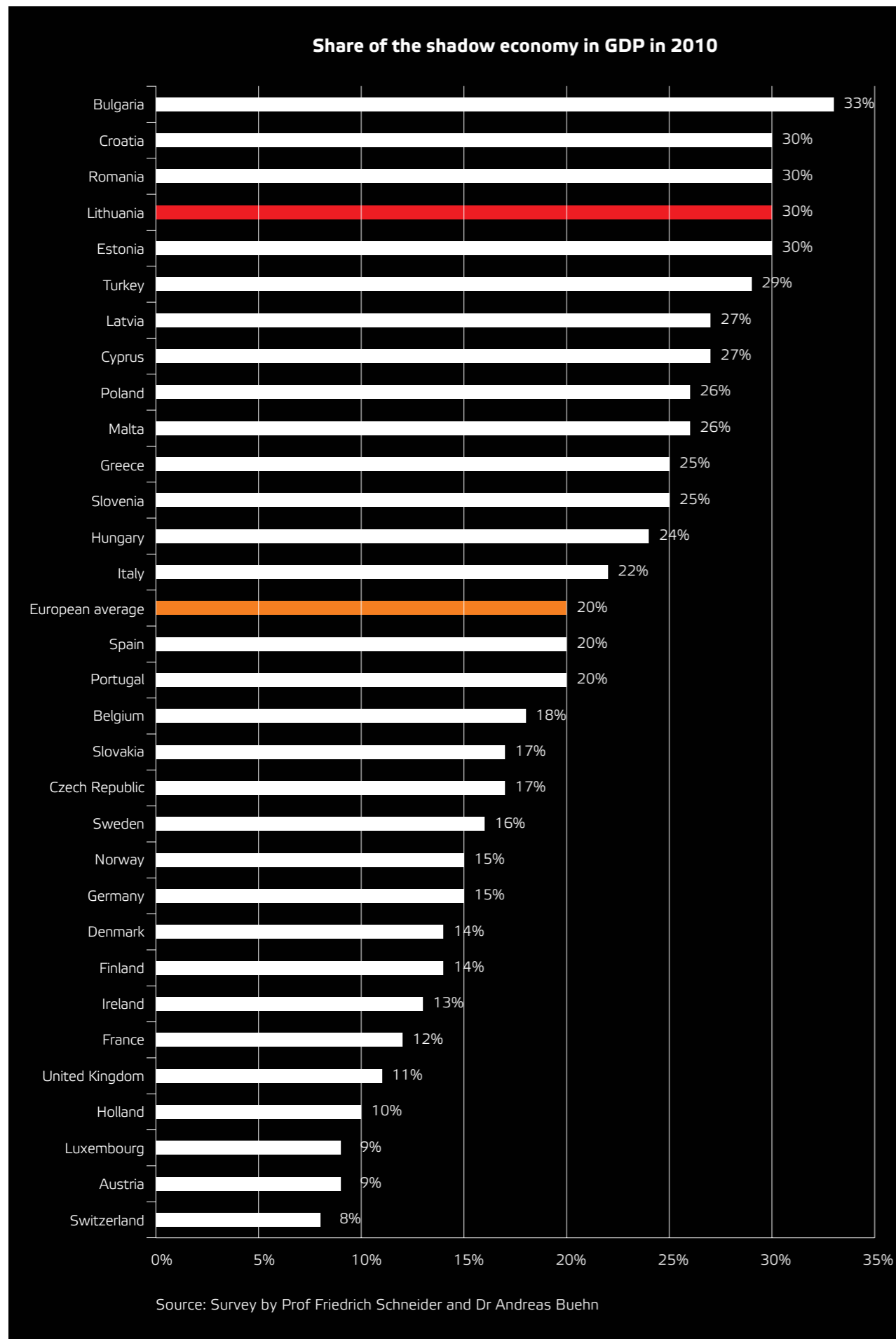
The latest official figures of Statistics Lithuania are for 2009. Back then the non-observed economy comprised 17 per cent and grew by 3 percentage points based on a year-on-year comparison. According to the calculations of Statistics Lithuania, a similar level of non-observed economy was recorded in 2000 to 2001. Hence the official statistics also registered the growth of non-observed economy. It is important to point out that since 2011 Statistics Lithuania has included drug dealing, smuggling of alcohol and prostitution into the non-observed economy.

**Friedrich Schneider**, offered another estimation of the shadow economy in Lithuania and other European countries. He argues that the GDP share of the shadow economy in Lithuania was around 30 per cent in 2010.

All the above-referred studies use different estimation methods, but show the same growing trend of the Lithuanian shadow economy since 2008.

<sup>1</sup> World Bank report "Shadow Economies All over the World", <http://library1.nida.ac.th/worldbank/fulltext/wps05356.pdf>

<sup>2</sup> Schneider, Friedrich. "Size and Development of the Shadow Economy of 31 European and 5 other OECD Countries from 2003 to 2011", <http://www.econ.jku.at/members/Schneider/files/publications/2011/ShadEcon31.pdf>



According to the findings from the Survey of the Lithuanian Economy conducted by LFMI, smuggling of cigarettes, alcohol, fuel and other goods represents the highest share of the shadow. This activity comprises more than one third of total shadow (35 per cent). The second place, by size, goes to unofficial wages paid in 'envelopes' and to illegal employment. According to expert estimation, this part of the

shadow comprises 23 per cent of the shadow economy. Provision of products and services without paying taxes and hiding of business activity account for somewhat over one fifth, i.e. 21 per cent, of the shadow. While trade in illegal goods (excluding contraband goods) and services comprises more than one tenth of total underground market (12 per cent).



### 3. HOW MUCH SHADOW IS THERE IN THE MARKET OF EXCISE GOODS?



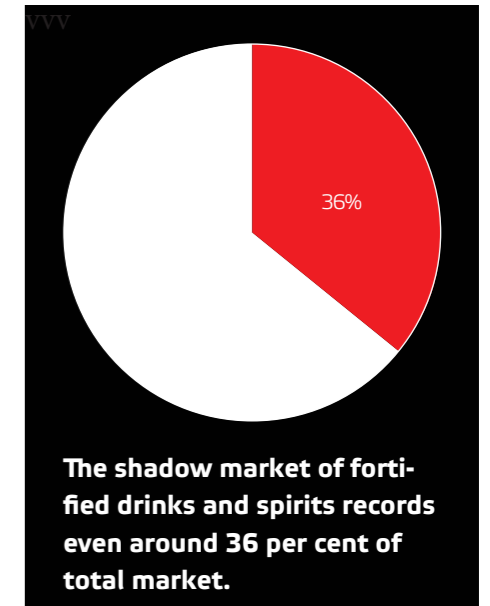
#### 3.1. Why excise goods?

This survey will further be limited to the part of the shadow economy which relates to the smuggling of and illegal trade in the three basic groups of excise goods (alcohol, fuel and cigarettes). The shadow of excise goods was chosen primarily because according to the

LFMI estimations it represents the greatest proportion of the shadow. Another reason is that until recently not so much data was available on part of the shadow market for excise goods (namely alcohol and fuel) and some that was did not exist in a single place.

### 3.2. The shadow market of alcoholic beverages

The shadow market of fortified alcoholic beverages will deprive the state budget of around LTL 410 million in excise duty and VAT in 2012.



#### Methodology to measure the shadow

To date, there have been no exhaustive surveys to estimate the size of the alcohol shadow market. Partnered by ISM, market research agencies, experts and researchers and through discussion, analysis and pilot surveys LFMI developed a methodology to better estimate one of the least examined segments of the shadow economy - the illegal market of alcoholic beverages. The research into the illegal market of alcoholic beverages consists of three parts followed by a summary of the findings obtained.

##### Survey of elders

The survey of heads of Lithuanian elderships aimed to find out the habits and trends of alcohol consumption in Lithuania. Elders were asked to estimate in percentage the legal and illegal structure of the alcohol market.

##### Survey of professionals

The survey aimed to find out how groups of

people related to the illegal alcohol market and highly competent in the field of trade in and consumption of illegal alcohol as part of their job or character of activity estimated the different parameters of illegal market. The survey involves manufacturers of alcoholic beverages, traders (retailers and wholesalers), control and health institutions, economists and analysts.

##### Population survey

This is a representative survey of the population followed by a quantitative assessment of the size of the shadow market based on the derived parameters of consumer attitudes and reported behaviours.

## Assessment of the alcohol shadow market

The market of alcoholic beverages can be broken down into the wine (fermented beverages), beer and spirits segments. Conducted research showed that the spirits segment represents the largest share of the illegal market compared with the much smaller illegal market share for beer and wine (fermented beverages).

The research comprised of three surveys showed that illegal products on the beer market account for approximately 4 per cent of total market. The shadow market for wines (fermented beverages) stands at around 5 per cent. Whereas the underground market of fortified drinks and spirits records as much as around 36 per cent of total market. This substantial difference in size of the illegal market can be explained by the fact that taxes (VAT and excise duty) for fortified spirits comprise a much greater share of the end price of goods compared to beer or wines. In addition, the relative prices (ratio between price and aver-

age wage) of fortified spirits are among the highest across the EU.

Findings from the elders' survey also revealed that illegal alcoholic beverages were available for purchase in many elderships of Lithuania. Sixty per cent of surveyed elders reported that illegally distributed / produced alcohol was available for purchase in their locations and only 17 per cent said there was no illegally distributed / produced alcohol in their elderships. Twenty-three per cent of elders did not respond.

The in-depth survey of professionals showed that drinking cosmetics, i.e. washing or cleaning detergents and perfumery which are consumed as alcohol beverages against their intended use, comprised some 7 per cent of the alcoholic beverage market.

A representative population survey also aimed to assess people's attitudes towards consumption of illegal alcoholic beverages and how much alcohol people consumed on the average. It was assumed that people who

tend to justify consumption of illegal alcohol consume more of illegal alcohol themselves, which was the basis for estimating the market share of illegal alcohol.

As the survey revealed, one third of the re-

spondents (33 per cent) either justified consumption of illegal alcoholic beverages or tended to justify it. Sixty-two per cent either totally do not justify or tend not to justify consumption of illegal alcoholic beverages.

**Only 17 per cent of surveyed elders claimed there was no illegally distributed or produced alcohol in their elderships.**

## Categories and examples of shadow products

Depending on the nature of illegal alcohol, the alcohol shadow market can be broken down into a few categories of products:

- **Contraband alcoholic beverages and minor illegal trade**

This category of the alcohol shadow market can be further broken down into two groups. The first one is minor transportation of legal amounts of alcohol by individuals across border control posts from the Belarusian Republic and the Kaliningrad District of the Russian Federation when imported products are sold illegally in Lithuania.

The second group is 'genuine' smuggling when illicit quantities of alcoholic beverages produced abroad are illegally transported across the border. Like in the case of other excise goods, for both groups the essential reason for transporting alcoholic beverages is the price difference caused by the rate of excise duties in Lithuania and non-EU members.

Products transported over the border are illegally sold at marketplaces, next to them or among private acquaintances. Cases have been reported when illegal products were made available for purchase from homes; and specific brands can be 'ordered' even before the goods cross the border.

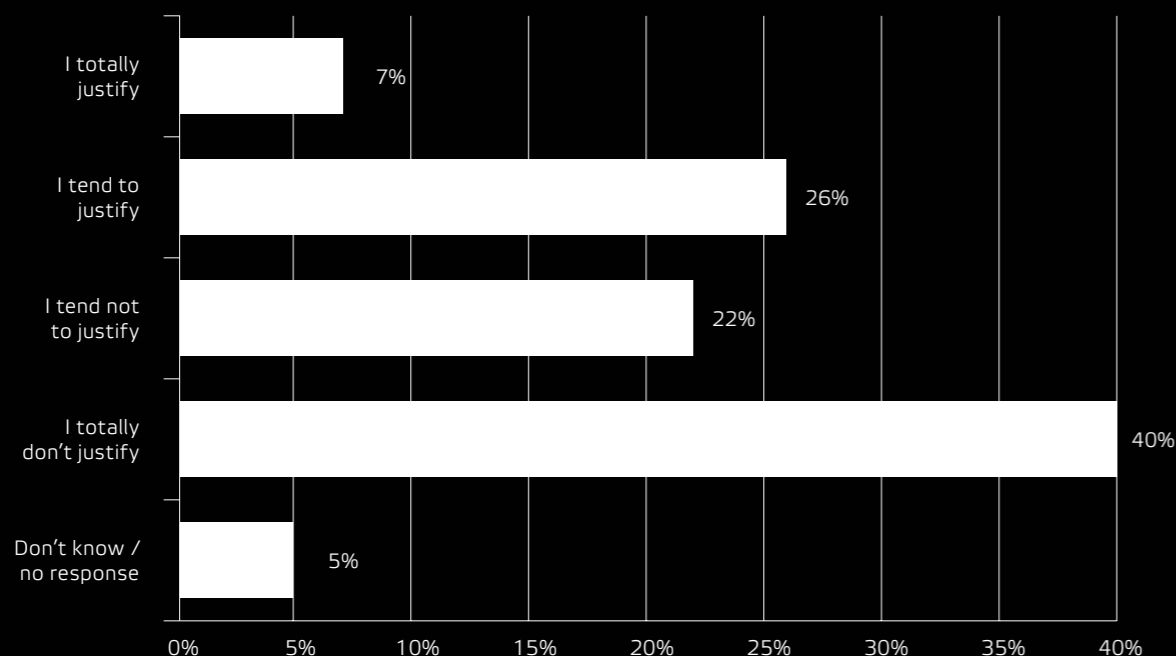
- **Denatured alcohol and alcohol falsifications made from it (bathtub gin; Lith. 'pils-tukas')**

This part of the alcohol shadow market involves legal products that contain alcohol and are denatured to prevent human consumption. These products are bought in Lithuania or elsewhere and their denaturation is reversed thus turning them into drinkable yet already illegal alcoholic beverages. One of the examples is buying large quantities of car window washing liquid that contains alcohol in Poland, processing it into alcoholic beverages and then selling them in Lithuania. Products made from denatured alcohol are sold through both legal and illegal points of sale bottled as brands recognisable by consumers.

- **Illegal home-made products (moonshine, Lith. 'samagonas', 'samané')**

The alcohol shadow market also includes alcoholic beverages produced from grain under home conditions. Products of illegal stills in the rural areas are sold by producers themselves. Distributors collect larger quantities of illegal alcohol and bring them to the cities and towns.

**Views of the population on the consumption of illegal alcoholic beverages (moonshine, contraband beverages, etc.)**



Source: Opinion survey of the Lithuanian population conducted by UAB Rait

- **Surrogate alcohol (cosmetic products)**

Cheap cosmetics (mouthwash, rubbing alcohol) available from kiosks, markets or supermarkets is used as cheap replacements for alcoholic beverages. They are not taxed with the excise duty and their price normally ranges from LTL 2

to LTL 3.5 per 200-250 ml. These 'beverages' are available in small packaging for convenient use. As surrogate alcohol is not classified as alcoholic beverages, it is not subject to the prohibitions applied to alcohol such as the night trading prohibition or the prohibition of sale to the under-aged.

One consumed bottle of illegal spirits means LTL 17 of taxes unpaid to the state budget.

## Cost price of moonshine

### Cost price of moonshine

The cost price of moonshine can be calculated by adding up all the costs incurred by the producer including preparation of grain, brewing and distillation, storage of produce, transportation of raw materials and finished products, wages, different kinds of 'conspiracy' fees and payments to the 'mafia'.

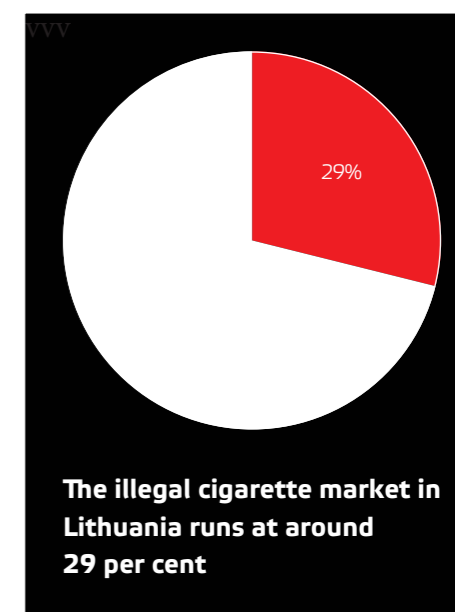
One ton of grain yields 300 litres of 60 degrees-strong moonshine. Producing larger quantities of moonshine may cost LTL 2,000 per ton of grain. In this case the cost price of 1 litre of moonshine would be around LTL 4.75.

Source: Association of Enterprises Trading in Alcoholic Beverages

## 3.3. The shadow market of cigarettes



Only 1 of 29 percent of illegal tobacco market results in LTL 11 million in excise duty and value-added tax loss.



### Methodology to measure the shadow

The share of the cigarette shadow market is measured based on the empty cigarette pack survey conducted by Nielsen research agency. The basis of the survey is collecting empty cigarette packs from litter bins or from the streets and calculating the proportion of cigarette packs that fall within the category of ille-

gal cigarettes or those produced outside Lithuania. This survey is conducted twice annually to evaluate the dynamics of the cigarette shadow market. The major limitations of the survey is that it excludes private spaces (houses and flats) as well as workplaces and the rural areas (as only cities and towns are surveyed).

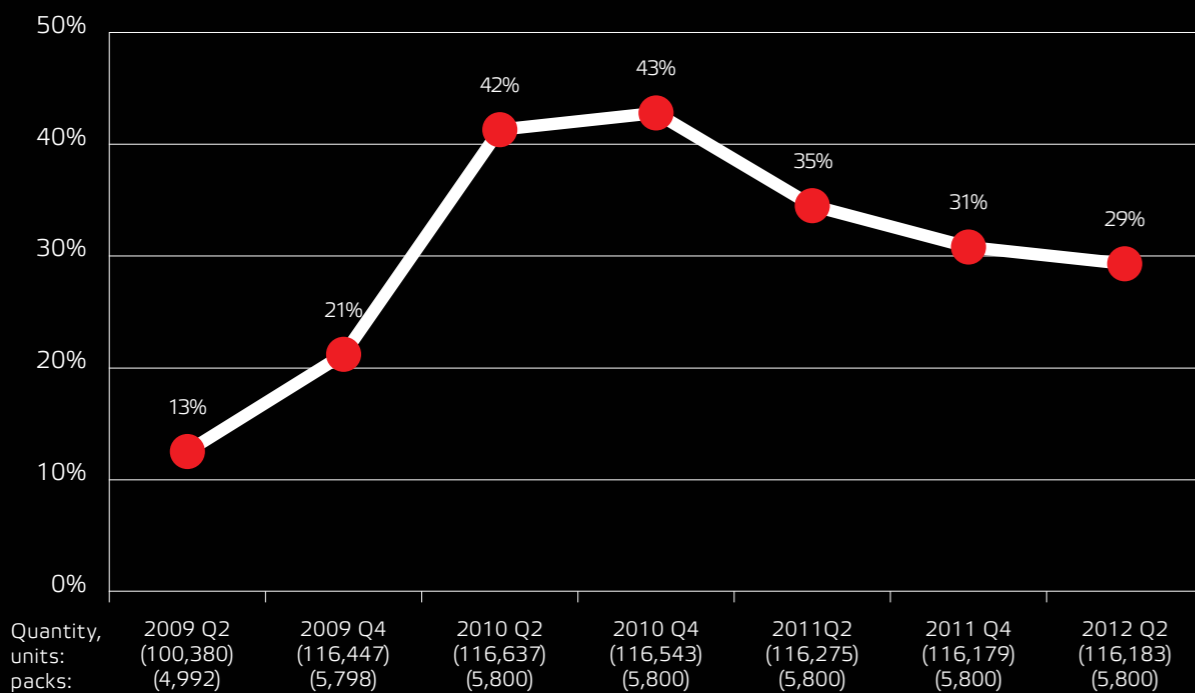
## Assessment of the cigarette shadow market

Based on the empty cigarette pack survey in Q2 2012, 29 per cent of cigarette packs were non-Lithuanian, i.e. produced and legally sold outside Lithuania. The found quantity

of falsified cigarette packs was insignificant, i.e. only 0.1 per cent. The greatest percentage, i.e. around 42 per cent, of non-Lithuanian cigarettes was found in 2010 followed by a decrease in 2011.

### Results of the empty pack survey

#### Percentage of non-Lithuanian packs found



A trend has been observed that the majority of packs of cigarettes of non-Lithuanian origin is found in border areas. The greatest percentage of non-Lithuanian packs was found in the towns of Marijampolė (48 per cent), Tauragė (45 per cent), Jonava (45 per cent), Panevėžys (38 per cent) and Alytus (37 per cent). The lowest one was recorded in the towns of Utena (20 per cent), Klaipėda (20 per cent) and Visaginas (20 per cent).

The drop in the consumption of contraband cigarettes has been due to several factors such as the country's economic situation, which im-

proved slightly in 2009, and increased income of the population, people's reduced tolerance towards contraband and illegal goods and the efforts of the public authorities and market players to combat cigarette smuggling.

Each consumed pack of contraband cigarettes deprives the state budget of approximately LTL 6 in excise duty and value-added tax.

## Categories and examples of shadow products

The tobacco shadow market includes two types of cigarettes. Cigarettes purchased in the neighbouring Russia and Belarus and transported illegally across the border (contraband) represent the greatest share of the shadow. The other type is cigarettes falsified by illegal factories.

The empty pack survey shows that the highest percentage of contraband cigarettes reaches Lithuania from Belarus (in Q2 2012 the share of Belarusian cigarette packs found comprised around 20 per cent) while a smaller share comes from Russia (6 per cent).

According to the findings, the share of falsified cigarettes in Lithuania is not significant. The major cause of smuggling is the difference in prices for tobacco products between Lithuania on the one side and Russia and Belarus on the other, which is caused by significant differences of the excise duty for tobacco products. Trade in illegal cigarettes takes place at markets and through distributors with their own circle of customers. A high percentage of contraband goods is intended not for the Lithuanian market as they are in transit to other EU Member States.

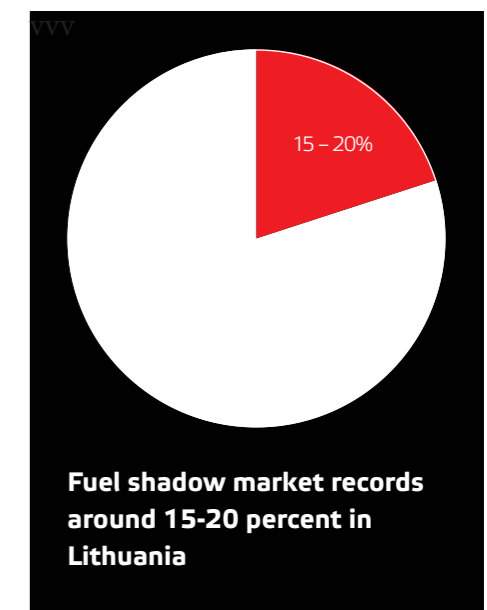
## 3.4. The shadow market of fuels

### Methodology to measure the shadow

In Lithuania, fuel imported to Lithuania from the neighbouring non-EU states and sold illegally without paying the excise duty and other taxes is considered the fuel shadow market. Fuel for personal use imported in car tanks by legally crossing the border is not attributed to the shadow economy as long as it is not sold illegally. This survey to measure the fuel shadow market in Lithuania employed a number of methods.

First, as in the case of the illegal market of alcoholic beverages, a survey of elders was used to examine the fuel shadow market. It aimed to find out the habits and trends of consuming fuel in Lithuania. Elders were asked to estimate in percentage the share of legal and illegal fuel consumed in Lithuania. In addition to the survey of elders, the analysis included two other surveys, which indirectly measured the percentage of Lithuanian population that use illegal fuel.

Another indirect method to measure the illegal fuel market in Lithuania relates to the specific nature of fuel from Belarus and the Kalinin-



grad District. When in winter the air temperature drops to a certain level, illegal fuel (diesel) from these countries is not suitable for use owing to its lower quality. Hence the scope of consuming illegal fuel can be traced by calculating the increase of the quantity of legal fuel bought during the coldest weeks of the year

based on the assumption that during those weeks a high proportion of consumers of illegal fuel purchase legal fuel from Lithuanian petrol stations.

**Every 50 litres of illegal petrol deprive the state budget of LTL 118 in taxes.**

## Assessment of the fuel shadow market

May 28 through June 15, 2012, a representative survey of the Lithuanian elders was conducted by email and phone. The survey questionnaire was sent to 547 elderships, of which 298 returned them, recording a 54 per cent response rate. Elders were asked what type of fuel the population of their elderships was using.

Lithuanian elders estimate that illegal fuel (petrol, diesel) in Lithuania accounts for 18 per cent on the average while the legal market stands at 82 per cent. Similar findings were obtained from the representative population survey conducted by RAIT research agency in 2012<sup>3</sup>. Fifteen per cent of the Lithuanian residents claimed they fuelled up not at petrol stations, but bought fuel at lower price from people at the market or other places. Another 7 per cent responded they fuelled up in the neighbouring countries (Kaliningrad District, Belarus and Poland). Hence findings from this survey show that around 15 per cent of the Lithuanian population fuel up in the shadow. There are a few factors to be considered when interpreting the findings from this survey. Firstly, when these questions are asked directly, not all respondents remain honest, which means that the shadow may actually involve a greater part of the population. Secondly, the fact that 15 per cent of residents buy fuel illegally does not necessarily mean that the

shadow comprises 15 per cent of the Lithuanian fuel market. Those who claimed that they bought fuel in the shadow could have bought illegally only part of their consumed fuel, and in addition, the quantity of consumed fuel between those who buy fuel illegally and those who do not may differ significantly.

In late March, the Autoplus.lt portal conducted a survey of its visitors with more than 3,500 respondents<sup>4</sup>. One in five drivers (around 20 per cent) in the survey claimed they used diesel fuel or petrol from Belarus. The highest percentage of respondents, as much as 27 per cent, claimed they used Belarusian diesel. Fourteen per cent fuelled up with petrol from Belarus. The survey did not elaborate on the question whether the fuel from the neighbouring state was bought illegally in Lithuania or imported across the border in fuel tanks for personal use.

Week five of 2012 was the coldest week in the winter of 2011/2012 when the air temperature in Lithuania dropped to 17.8 °C on the average<sup>5</sup>. A comparison between this week and week three of 2012 (when the air temperature was not as low and dropped to the average of 3.6 degrees below zero) shows a distinct growth in legally bought fuel. Lithuania's four major fuel chains, Lukoil, Neste, Statoil and Ventus recorded a rise of 21 per cent for sold petrol and 19 per cent for diesel

fuel. These figures is another rough estimation of the illegal fuel market in Lithuania assuming that growth in the consumption of legal fuel was, to a large extent, due to namely the fact that during the coldest spell of the season people gave up on illegal and less reliable fuel.

A summary of the findings from the four surveys described above leads to the conclusion that the illegal fuel market in Lithuania comprises approximately 15 to 20 per cent.

## Categories and examples of shadow products

Fuel is the 'cargo' of motor cars and trucks crossing the customs posts, which is transported in car tanks. Importing both petrol and diesel fuel from Russia and Belarus pays off because fuel is much cheaper in those states on account of the lower excise duty.

Imported fuel is usually purchased from drivers and afterwards resold by residents of the border area. It should also be pointed out that

the majority of illegal fuel products are detained not at the border, but only when they are being illegally sold on the Lithuanian domestic market.

Illegal sale of petrol or diesel takes place at parking lots next to marketplaces or other visited spots. Vendors normally have a permanent circle of customers.

**Over the first seven months of 2012, the Lithuanian illegal fuel market deprived the state budget of around LTL 160 million in excise duty.**

<sup>3</sup> [http://www.rait.lt/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=110&cntnt01lang=lt\\_LT&cntnt01returnid=93](http://www.rait.lt/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=110&cntnt01lang=lt_LT&cntnt01returnid=93)

<sup>4</sup> <http://www.ekonomika.lt/naujiena/kas-penktas-vairuotojas-naudoja-baltarusiskus-degalus-23265.html?page=1>

<sup>5</sup> Based on Gismeteo.lt

## 4. NEGATIVE EFFECTS OF THE SHADOW ECONOMY



### Negative effects on public finance

The effect of the shadow on public finance is twofold. First, the shadow economy is almost always related to non-payment of part or all of the taxes. This means that the burden of maintaining the public sector and public services falls on the shoulders of fewer people and thus becomes greater for them. With a vigorously developed shadow economy high tax rates can mean a high burden of taxation for transparent players and at the same time lower budget revenue due to the high percentage of shadow players. The shadow economy is often responsible for the fact that increased

taxes reduce the budget revenue or increase it by much less than expected. This may come detrimental to the quality of public services while the public sector, being unable to shrink, frequently has no other choice than to borrow and to bring forward the burden of taxation on future generations.

A clear correlation between the shadow economy and public services exists in the case of taxes with typical features of targeted taxes. This publication elaborates on the shadow relating to the excise duty. Smuggling and illegal

consumption of excise goods reduce the budget revenue from the excise duty. The excise duty has features of a targeted tax because part of the excise duty is being allocated to the implementation of specific programmes. For instance, a portion of the collected excise duty is earmarked to the funding of the road maintenance and development programme, the culture support fund and state support to the renovation of residential buildings. When the excise goods-related shadow is minimized

and at least part of the consumers start using legal products, funding for these programmes increases. Secondly, a part of public finance is spent on preventing the shadow economy. With growing incentives to operate in the shadow, the public sector needs to allocate more resources to fight the shadow and crimes. This is the indirect cost of the shadow economy, which is often forgotten when performing the impact analysis of newly adopted legislation.

### Effects on health

One of the vital negative effects of the shadow economy relates to the quality of goods purchased on the shadow market and to its effects on human health. The population opinion survey on smuggling and consumption of illegal goods conducted by LFMI in March, 2012 showed that out of illegal cigarettes, fuel and alcohol people trusted the quality of illegal alcoholic beverages the least. This makes sense.

The alcohol existing on the shadow market

is not inspected by nutrition and health specialists. Its quality is not controlled. This often severely affects human health because the alcohol contained in drinks and perfumery produced from denatured alcohol is different than in legal alcoholic beverages. Large quantities of poisonous substances such as methyl alcohol or ethylenglycol are found in illegal products, which affect the kidneys and cause acute renal failure and coma.

#### Head of Toxicological Centre at Vilnius University, Robertas Badaras:

"You can recognise a person who was drinking cosmetics from the sweetish smell of perspiration. This is enough to understand that the person was drinking cosmetic products and not legal alcohol. Sometimes we get ten of such patients per day while some arrive so frequently that you don't even have to look at their face: we recognise them from brain X-rays.

The national record is 5 litres of car window washing liquid. We performed 15 dialysis sessions on the young man and saved his life. The poisonous substances ethylenglycol and methanol have the fastest effect. Ethylenglycol found in 'anti-freeze' liquids is toxic poison, which causes the risk of hepatic, renal and ce-

rebral impairment. Half a glass is a lethal dose. It is a versatile poison and has taken away the highest number of lives in the world. One small tank is enough to kill some twenty thousand people.

The less toxic isopropyl alcohol is found in cosmetic products and diluents is a brain-affecting poison. Isopropyl alcohol raises a stronger euphoria than spirit, but its consumption is the cause of disorders of the digestive tract as well as bleeding from the digestive tract and lungs.

Patients who drank away their liver, kidneys or brain, or frequently, all combined, and have to be hospitalised for several weeks and to be treated with costly drugs and equipment are a great deal of concern to all of us. We all pay for the treatment of these patients as they pay no taxes themselves."

Lithuania provides no statistics on people poisoned with these substances of illegal alcohol because hospitals treating people poisoned with alcohol keep no records on who drank too much legal alcoholic beverages and who poisoned themselves by consuming poisonous alcohol of unknown origin. This is because healthcare establishments do not perform the blood tests which can help identify the origin and type of alcohol as these are not financed from the state patient funds. Mr Badaras, nevertheless, estimates that people treated from the effects of surrogate alcohol com-

prise around 25 per cent of all patients<sup>6</sup>.

The quality of contraband cigarettes is normally not examined, therefore it is difficult to tell whether they are more harmful for human health than regular cigarettes. But while the goal of the excise duty for cigarettes is to increase the price for legal cigarettes with the purpose of reducing their consumption, contraband cigarettes encumber achievement of this goal on account of being cheaper and hence more affordable.

## Incentives for organised crime and corruption

Participation in shadow activity violates the law and, in itself, is criminal action, which means that the factors which facilitate the shadow market also facilitate crimes. Importantly, shadow activity often becomes a source of income for criminal elements (i.e. earnings from contraband may be used to develop other criminal activities).

As pointed out previously, a high level of cor-

ruption in the country is favourable to the shadow economy. On top of all that, there also exists feedback when income received from profitable shadow activity allows paying big bribes and thus facilitates corruption. Regulations which create preconditions for the emergence of shadow activity at the same time create an environment for the emergence of corruption.



<sup>6</sup> Story of Lietuvos ryto TV "Peculiarities of consuming Polish cosmetics" 2012 06 25, <http://tv.lrytas.lt/?id=13404735901338434534>

Shadow alcohol increases crime, the country's elders say. They believe that a decreased number of points selling illegal alcohol could bring the crime rate down.

## Lost opportunity to protect interests at legal institutions

Individuals involved in the shadow economy (e.g. working without an employment contract, purchasing illegal goods and services) are unable to conclude legal contracts and hence lose the opportunity to protect their rights at legal institutions, e.g. courts. If a substantial proportion

of the country's goods and services is created in the shadow economy, the public legal mechanism loses its meaning and weight and there occur preconditions for the parallel development of underground criminal mechanisms of implementing the agreements.

## Material losses

The quality of goods on the illegal market is detrimental not only to human health, but also to material well-being. For instance, car fuel illegally purchased from the Kaliningrad District of Belarus is of lower quality and

may be diluted. For this reason illegal fuel bought for less can eventually mean substantial repair costs for the car owner.

## 5. WHAT'S NEW ON THE SHADOW MARKET OF EXCISE GOODS



### 5.1. Cosmetic products enter the alcohol market

Consumption of cosmetic products (rubbing alcohol, mouthwash) not according to their intended use is part of the alcohol market. Based on the findings from the survey analysed in section 3.2. of this publication, consumption of cosmetic products not for their intended purpose comprises around 7 per cent of the alcohol market in Lithuania.

The major cause of demand for these products and their consumption as alcoholic beverages is that these products are not taxed

with excise duty and are therefore relatively cheaper than legally sold alcoholic beverages. These products are not subject to a licence for alcoholic beverages, and neither to the night trading prohibition or the compulsory age check of customers.

Cosmetic products consumed as alcoholic beverages are normally available in small packaging from kiosks, markets and supermarkets. Their price ranges from LTL 2 to LTL 3.5 per 200- 250 ml. As surrogate alcohol is not clas-

sified as alcoholic beverages, it is not subject to the prohibitions applied to alcohol such as the night trading prohibition or the prohibition of sale to the under-aged. This means that surrogate alcohol is available for purchase on the market anytime and anywhere.

Furthermore, mouthwashes and other cosmetic liquids are much more risky than legally sold liquors since, in addition to ethyl alcohol, they contain harmful additives. A test performed by the customs laboratory on the composition of a mouthwash produced in Poland showed that it did not meet Lithuania's applicable requirements for denaturing of al-

cohol contained in products. Another product, the rubbing alcohol with images of raspberries, peaches, etc. on its packaging, resembles a foodstuff not by chance.

According to the figures of the State Tax Inspectorate, for several years in a row Lithuania has seen growing imports of mouthwashes and colognes that can be consumed as alcoholic beverages. In just seven years the import of mouthwashes from Poland boosted nearly eight times. Import of skin care products from this neighbouring state has doubled.

### Cosmetic products are the most frequently used substitutes for alcohol



### Rubbing alcohol

The strongest of these 'drinks' is rubbing alcohol with 60 per cent alcohol content, available from supermarkets since 2006.

The use of the product is indicated as follows: "For treating oily and sensitive skin prone to rashes", and it should be used to "disinfect and clear the skin". A 200 ml bottle of such liquid costs around LTL 2.3. The product currently comes in three flavours: peach, black currant and raspberries.

100 per cent of customers buy it for drinking\*.

\* Source: Nordstat, 2012





## Mouthwash

Another product from a Polish manufacturer: mouthwash with 56 per cent alcohol content. Indicated use: "For healthy teeth, gum protection and a fresh breath." A 200 ml bottle of such liquid costs approximately LTL 3.5. 95 per cent of customers buy it for drinking\*.



## Cologne

Favourite and already a classic, cologne and other perfumes with 50 per cent alcohol content. Intended use: "Aftershave. Apply on face and neck. For fresh and good-smelling skin. For external use only." Its market price is LTL 3 for a 195 ml flask. 66 per cent of customers buy it for drinking\*.

\* Source: Nordstat, 2012

## 5.2. Increasing share of Byelorussian contraband cigarettes



The interesting trend on the contraband cigarette market over the last few years relates to the origin of contraband cigarettes in Lithuania. Before 2010, the majority of contraband cigarettes were imported to Lithuania from Russia. The situation started changing

in 2010. In the second quarter of 2010, the greatest share of the found empty packs of contraband cigarettes still came from Russia while at the end of 2010 contraband cigarettes from Belarus already ran at more than 50 per cent.

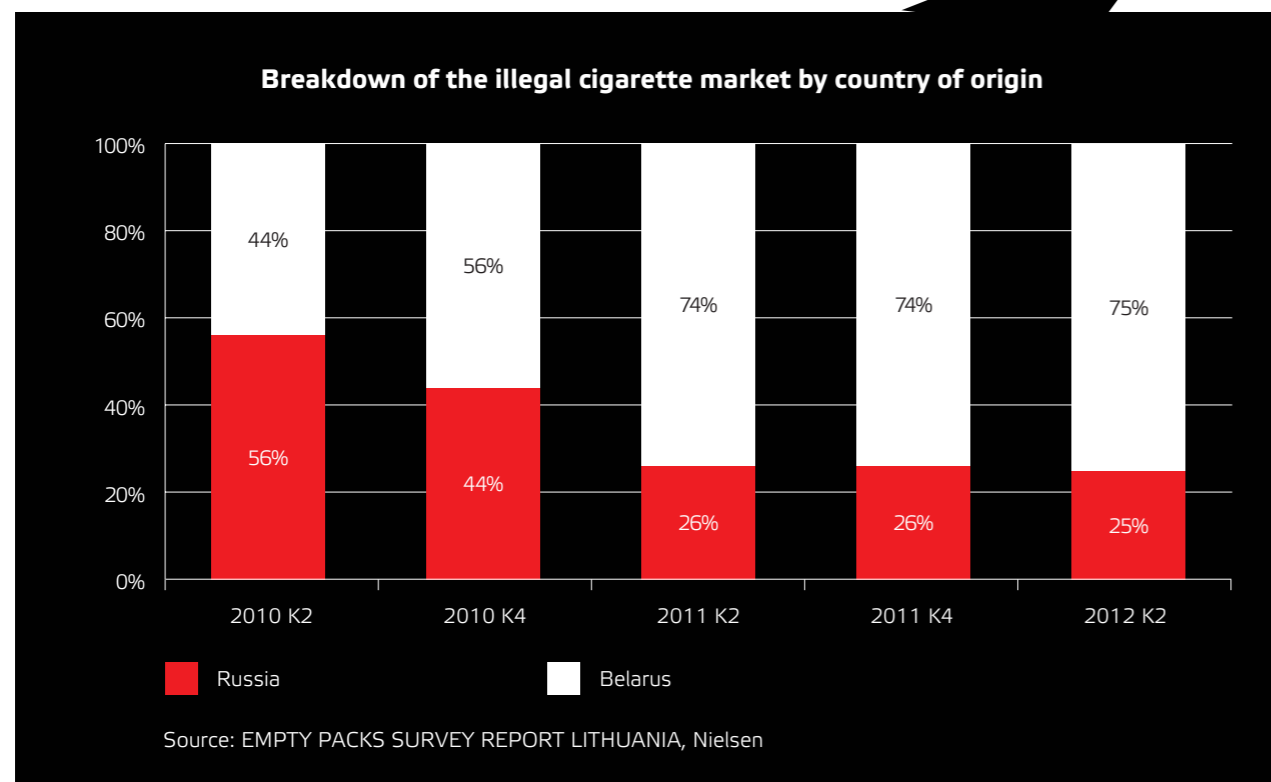
This trend further persisted in 2011, when contraband cigarettes from Belarus accounted for already three fourths of all contraband cigarettes. A similar ratio remained until Q2 2012.

One of the principal causes why the origin of contraband cigarettes in Lithuania changed is that the cost price for a pack of the most popular cigarettes in Belarus is lower than in the Kaliningrad District. Individuals engaged in smuggling from Belarus are at risk of losing a lower-value cargo than on the border with the Kaliningrad District of the Russian Federation.

It is also important to point out some of the actions of cigarette manufacturers directed against smuggling. Until recently, the Saint George brand owned by Japan Tobacco Inter-

national represented the greatest proportion (around 70 per cent) of contraband cigarettes in Lithuania. To reduce the smuggling of its branded cigarettes to Lithuania and other European countries, the company started cooperating with law enforcement authorities to tighten the sales control in Russia and imposed restrictions on the sale of cigarettes in the country for vendors assumingly related to the distribution of contraband. For this reason the market of contraband cigarettes refocused to Belarus-produced brands..

Another reason why the flow of smuggling changed is that illegal crossing of state border is subject to administrative liability in the Republic of Belarus and to criminal liability in the Kaliningrad District of the Russian Federation.



Lithuanian  
Free  
Market  
Institute

Seimyniskiu str. 3A, 09312 Vilnius  
Tel. (8 5) 250 0280, fax. (8 5) 250 0288, e-mail: llri@lrinka.lt  
www.lrinka.lt, www.blogas.lt/LLRI

