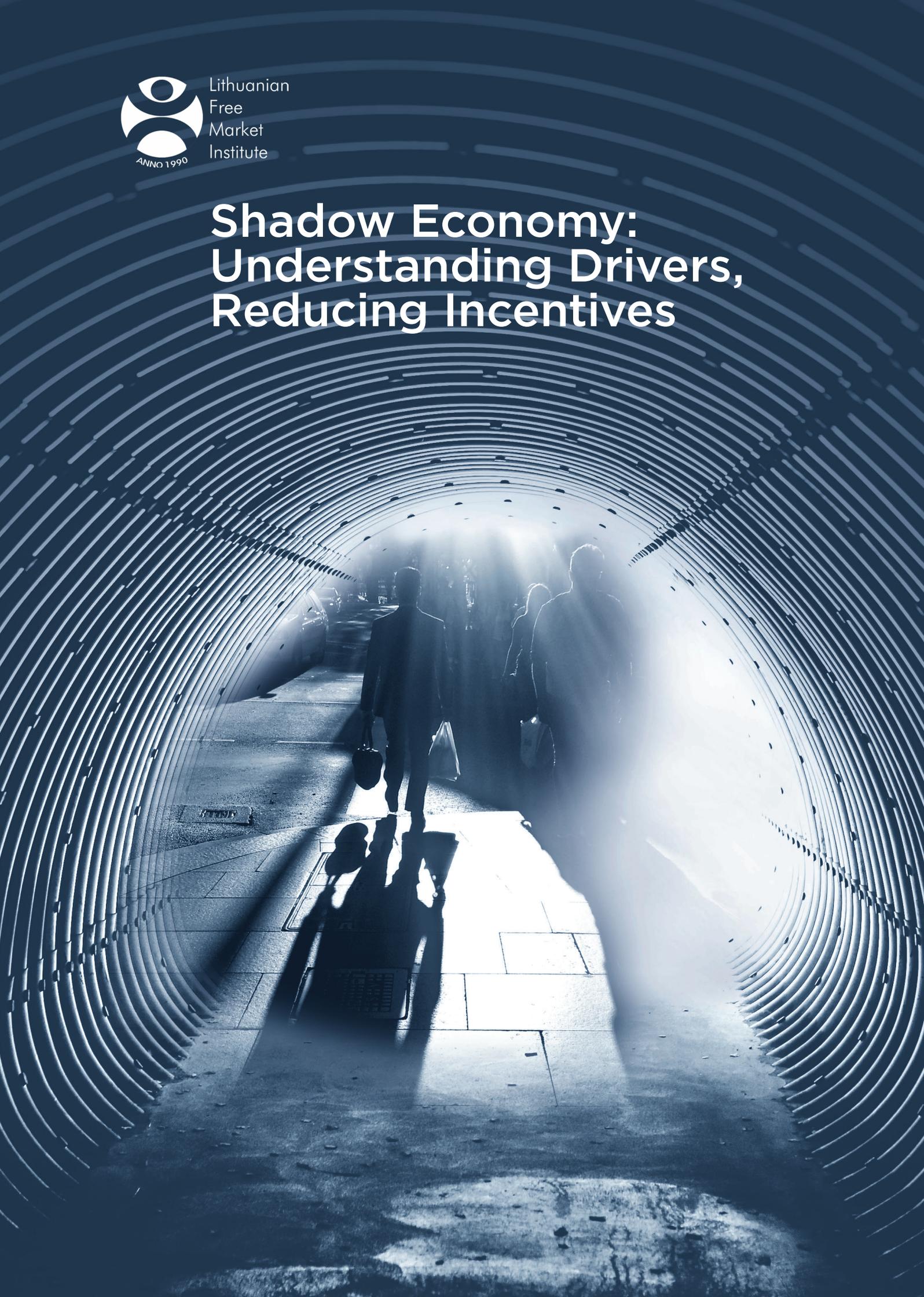




Lithuanian  
Free  
Market  
Institute

# Shadow Economy: Understanding Drivers, Reducing Incentives





# **SHADOW ECONOMY: UNDERSTANDING DRIVERS, REDUCING INCENTIVES**

Edited by Vytautas Žukauskas

Vilnius  
2018

---

## CONTENTS

INTRODUCTION .....	2
THE SIZE OF THE SHADOW GOODS MARKET .....	4
DRIVERS OF THE SHADOW GOODS MARKET .....	8
Taxes and affordability of goods .....	10
Regulation and the business environment .....	14
Justification .....	15
Likelihood of detection and punishment .....	18
THE SIZE OF THE SHADOW LABOUR MARKET .....	21
DRIVERS OF THE SHADOW LABOUR MARKET .....	25
Level of income and taxes .....	25
Regulation .....	31
Satisfaction with the government and public services .....	32
Social security .....	33
Justification .....	34
Likelihood of detection and punishment .....	35
CONCLUSIONS .....	37
ANNEX .....	40
REFERENCES .....	41

---

## INTRODUCTION

The aim of this publication is to present and analyse the results of representative population surveys into public perceptions of the shadow economy and engagement in illicit activities that were conducted in six countries – Lithuania, Latvia, Estonia, Poland, Sweden and the Czech Republic – between March and April, 2018.<sup>1</sup> This study will be followed by a report that will offer a more in-depth investigation of the survey results on the drivers of the shadow economy, together with extensive policy recommendations.

The shadow economy can generally be defined as economic activities (labour, goods produced, and services rendered) that are conducted in non-compliance with applicable laws, for the purpose of avoiding taxes or/and regulations. In order to effectively counteract the shadow economy, it should not just be viewed as a source of criminal offences. It is important to recognize that the shadow economy is primarily concerned with value creation. This suggests that the fight against the shadow economy is at its most effective not when illegitimate activities are completely eradicated, but when they are transformed from the unofficial to official domain. In order for this to occur, one should consider the legal environment in which economic activities are carried out. Is it conducive to working and doing business? Incentives to participate in the shadow economy always stem from restrictions on legal economic activities, be they taxes or regulations. The primary way to curb the shadow economy, therefore, is to create a favourable legal environment for economic activity.

This research report is based on a direct, micro (survey) approach to investigating the shadow economy. This approach is valuable in that it allows for a better understanding of people's motivations, perceptions and attitudes. It is impossible to formulate sound policies without understanding the public attitudes those policies are intended to address. We believe that this publication not only provides new insights as to the extent of the shadow economy in the countries under analysis, but its micro approach helps us to better understand the perceptions of shadow

economy participants and the public at large. This proves invaluable in navigating policies designed to combat the shadow economy.

The shadow economy evolves when restrictions are placed on economic activities: without restriction, there can be no shadow economy. All other conditions being constant, the more burdensome taxes and regulations get, the more incentives they create to participate in the shadow economy. Restrictions on legitimate economic activities are therefore defined as causes of the shadow economy.

Importantly, the same level of restrictions (tax rates or regulations) may have a varying impact on the shadow economy in different countries depending on social, cultural, economic and legal circumstances. Even though incentives for shadow economic activity always stem from restrictions, there are always other factors that determine to what extent high taxes and burdensome regulations influence the shadow economy. These factors vary in nature from economic (e.g. the standard of living or a country's economic situation) to social (e.g. public justification of the shadow economy), legal (e.g. laws regulating institutional policies for combatting the shadow economy) and others. The difference between the restriction of economic activity as the primary incentive for the shadow economy and those other factors is that, if there were no restriction of economic activity, the other factors alone would not cause the shadow economy. Those factors can only be viewed as circumstances or an environment that either facilitates engagement in the shadow economy or deters people from illicit practices. These circumstances are termed factors of the shadow economy.

This report analyses the most important factors of the shadow economy, including:

- Public attitudes towards government and its services, and belonging to the national community. The extent to which people sympathise with the government and are satisfied with public services may influence their decision to participate in the shadow economy. Feelings of belonging to the national community may also play no small part.

<sup>1</sup> A similar survey was conducted in May–June 2015 in Lithuania, Latvia, Estonia, Sweden, Poland and Belarus.

- Public attitudes towards the shadow economy and tax morale. Justification of the shadow economy and attitudes towards paying taxes in general may influence participation in the shadow economy.
- Punishment and the likelihood of being detected. People's perceptions of the effectiveness of those institutions responsible for fighting the shadow economy, particularly their perceptions of the severity of punishment and the likelihood of getting caught, may influence participation in the shadow economy.
- People's income and the affordability of goods and services. The degree to which people can afford essential goods and services, their level of income, the country's economic situation, and the conditions of the labour market, may influence participation in the shadow economy.

In this report the causes of the shadow economy, together with its factors, are defined as drivers of the shadow economy.

This report is based on representative population surveys designed by the Lithuanian Free Market Institute and conducted by the market and public research company Spinter Research in Lithuania, Latvia, Estonia, Poland, Sweden, and the Czech Republic. The main goals of the surveys were to elicit public perceptions of the shadow economy and the level of participation in illicit activities. The target audience were 18 to 75-year-old residents, with a total sample size of 6,055 across the six countries. The surveys were carried out based on the CAWI (Computer Assisted Web Interview) method using a standardised questionnaire. The chapters below present an overview of the survey results in all six countries.

This report is divided into two main parts. The first part looks into the shadow goods market, in which people buy goods or services from illegitimate channels or from legitimate sources who do not declare their sales.<sup>2</sup> We begin by analysing the extent to which people engage in the unofficial goods market. We then go on to investigate public perceptions

and attitudes: the causes of the shadow goods market, justification, perceptions of detection and punishment, and other related issues. Drivers of the shadow goods market are explored in the broader context of relevant data, information and studies from other sources.

The second part of the report analyses the shadow labour market, in which people work without job contracts or with job contracts but receiving part of their income as an "envelope wage." This analysis follows a similar structure to that of the first part on the shadow goods market. We start with the scope of undeclared work and go on to look at people's perceptions of shadow employment and its drivers, providing a broader context of relevant information and data.

This part of the survey focuses on people's experiences with the shadow goods market. The shadow goods market covers unregistered purchases of two types: (i) the purchase of legitimate goods or services from officially registered shops or service providers when the buyer does not receive a receipt, and the seller does not officially account for these revenues; and (ii) the purchase of goods or services from people who are not officially registered and do not pay any taxes at all.

<sup>2</sup> This survey does not cover goods or services that are illegal to sell or possess, such as drugs or prostitution. We analyse goods and services that are legitimate but sold in non-compliance with law.

## THE SIZE OF THE SHADOW GOODS MARKET

Experiences with illicit purchases differ widely between countries. The highest share of people claiming to have bought illegitimately was in Lithuania. A total of 59% of respondents in Lithuania reported that during the last 12 months they had made a purchase from an official source, knowing or suspecting that the revenues were not officially declared. As many as 27% said they had done so sometimes (three to ten times) or regularly (ten times or more). In Latvia, the share of respondents having experience of purchases without a receipt from legitimate sources was lower, at 52%. In Estonia it was 36%. The Czech Republic, Poland and Sweden reported significantly lower incidences, with 29%, 27% and 27%, respectively. (Fig. 1)

In the Baltic states and Poland, the incidence of purchases without a receipt from official channels was down compared with the surveys carried out in 2015<sup>3</sup>. The number had

<sup>3</sup> A similar survey was carried out in 2015. It included Lithuania, Latvia, Estonia, Belarus, Poland and Sweden. The Czech Republic was not covered, therefore comparison of the 2018 and 2015 survey results does not embrace the Czech Republic. A report on the 2015 survey can be found at <https://www.llri.lt/wp-content/uploads/2015/11/Shadow-Economies-in-a-Baltic-Sea-Region.pdf>

fallen by 4 p.p. in Lithuania; 5 p.p. in Latvia and Estonia; and 10 p.p. in Poland. Unlike these countries, Sweden recorded an increase of 6 p.p. in the share of respondents claiming they had experience with illicit purchases from registered providers, from 21 to 27%. (Fig. 2 and 3)

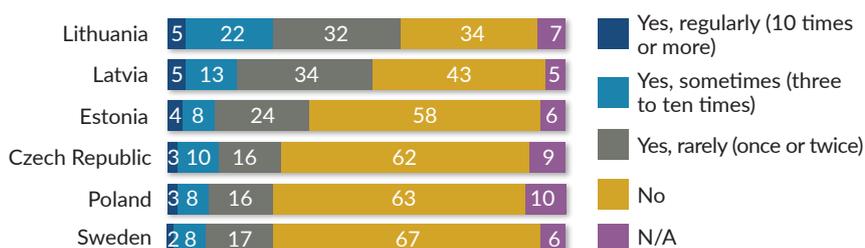
In all countries the incidence of purchases from unofficial sources was significantly lower than that of purchases from legitimate channels without taking a receipt. The country in which the highest share of respondents reported purchases from illegitimate suppliers was in Latvia, with 39%. In Latvia, 43% of respondents had bought illicitly regularly, i.e. 10 times or more, and 12% sometimes (three to ten times). Lithuania came next, with 35% of respondents reporting experiences of buying from illegitimate sources. The proportion of such respondents in Estonia was 28%. The lowest incidences were in Poland, the Czech Republic and Sweden, with 16%, 15% and 14%, respectively. (Fig. 4)

As with buying from unofficial channels, the incidence of

purchases without a receipt from legitimate sources had declined since 2015, with the exception of Sweden. In Lithuania and Estonia, it went down by 7 percentage points (hereinafter p.p.); in Latvia by 6 p.p.; and in Poland by 14 p.p. In Sweden, it increased by 2 p.p. The decrease in the incidence of illicit purchases can be contrasted with the incidence of undeclared work (it is analyzed in the second half of the report below), which remained roughly the same between the two surveys. It appears that changing economic and social conditions, as well as people's changing perceptions, had a greater impact on the markets for goods and services than on the labour market. (Table 1)

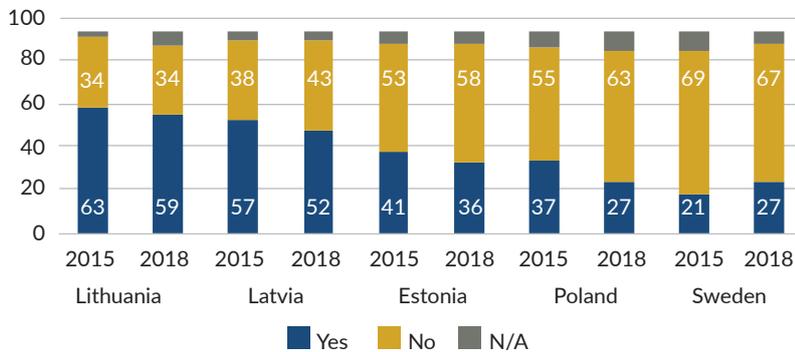
The types of goods and services bought illicitly were similar in many of the countries under analysis. Clothes topped the list in Latvia and Estonia: 28% of respondents in both countries mentioned that they had made unofficial purchases of clothes. In Lithuania and the Czech Republic, the most popular category of unreported purchases was foodstuffs, at 31% and 26%, respectively. In Poland, it was cigarettes at 22%, whereas in Sweden it was alcoholic beverages, at 18%.

**Fig. 1: Experience with purchases without a receipt from legitimate sources within the last 12 months (% , 2018)**

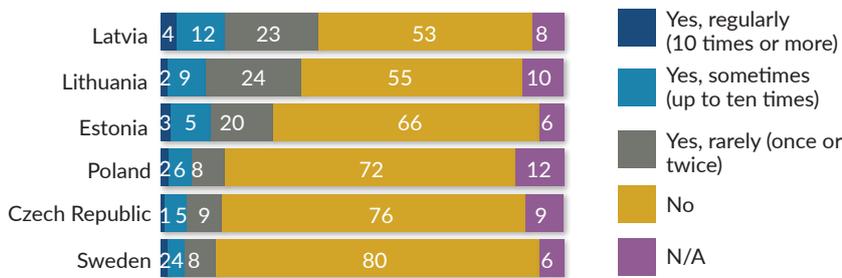


Poland was the only country to register significant changes (more than 10 p.p.), compared with the 2015 survey, in the types of goods that were the subject of illicit purchases. Here, sewing, clothing and shoe repair services decreased by 12 p.p. (from 18 to 6%), and cigarettes decreased by 10 p.p. (from 32 to 22%).

**Fig. 2: Experience with purchases without a receipt from legitimate sources within the last 12 months (% , 2015 and 2018)**



**Fig. 3: Experience with purchases from illegitimate sources within the last 12 months (% , 2018)**



The most popular categories of illicit goods and services are those that are very common and account for a large portion of consumers' spending (e.g. food products, clothes, auto repairs etc.), or those that are highly taxed (cigarettes, alcoholic beverages, fuel).

quite widespread in the countries investigated in our report. Stakeholder surveys suggest that illicit goods may account for as much as 14% of consumption in Lithuania and the Czech Republic. This proportion is slightly lower in the other

countries under discussion, with Estonia reporting the lowest share of 11%. Similar levels of illicit consumption were found among different categories of goods. (Fig. 5)

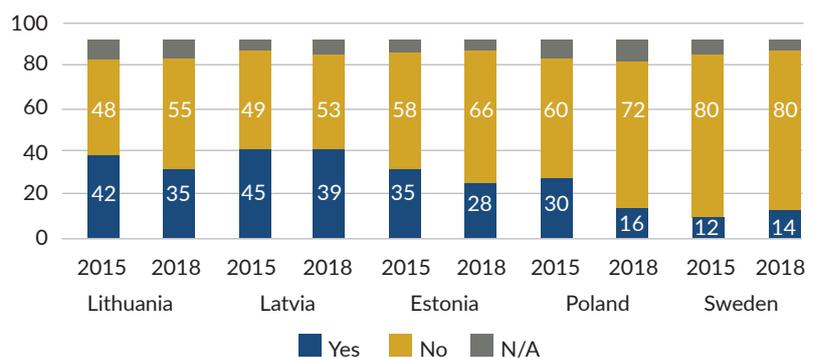
Our survey results correlate with the findings by Oxford Economics. According to Oxford Economics (2018), consumers in Lithuania and Latvia have the highest share of illicit or probably illicit consumption. Consumers in Lithuania estimate that roughly 16% of all goods they purchase are illicit and 32% of goods they have purchased may be possibly illicit. These proportions are 10% and 35% respectively in Latvia. The most notable differences can be found for the Czech Republic and Estonia. Oxford Economics finds illicit or probably illicit consumption to be somewhat higher in the Czech Republic and slightly lower in Estonia than reported in our surveys. (Fig. 6)

Going back to our survey, the participants were also asked about the experiences of their friends and relatives with buying cigarettes, alcohol or fuel from illegitimate sources.

A recent study by Oxford Economics (2018)<sup>4</sup> conducted in 37 European countries offers similar findings showing that illicit consumption is

4 The study by Oxford Economics covered five product categories: cigarettes and tobacco; alcoholic beverages; films, music, and games; clothing and accessories; and medicines and pharmaceutical products. It was based on consumer surveys (1,000 consumers in each country) as well as stakeholder (business executives, law enforcement and policy officials) surveys. Consumers were asked about their motivation for buying illicit goods.

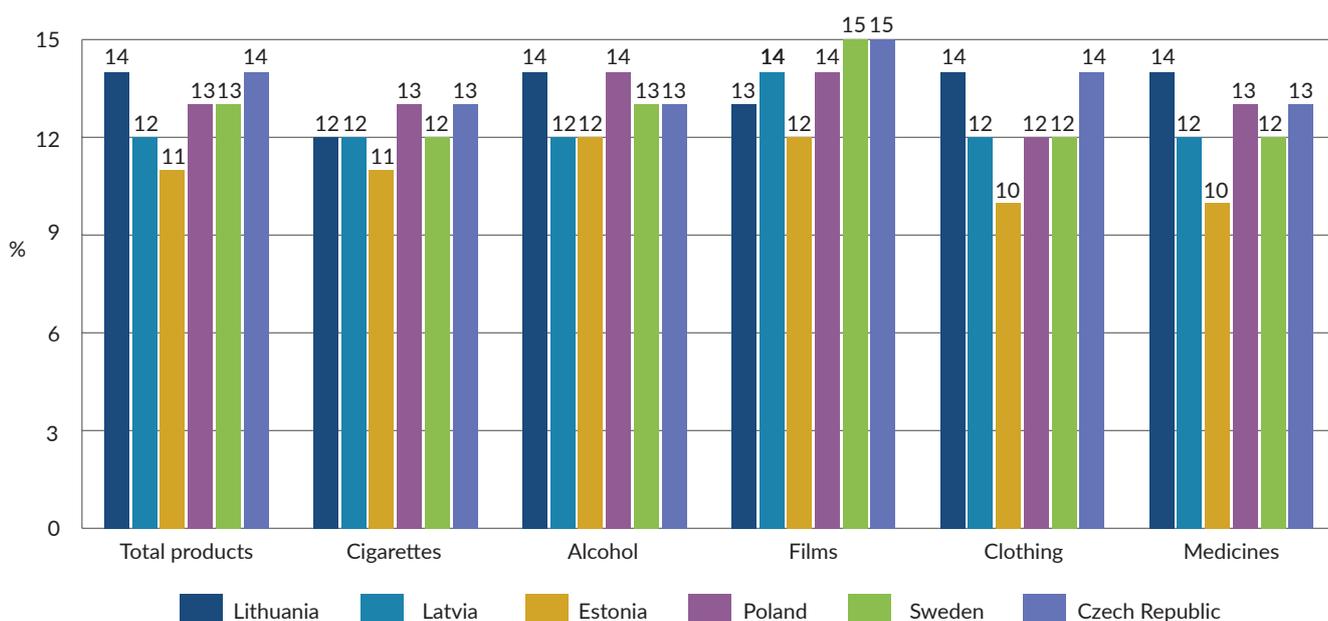
**Fig. 4: Experience with purchases from illegitimate sources within the last 12 months (% , 2015 and 2018)**



**Table 1: Categories of goods or services bought through illicit purchases (% , 2018)**

	Lithuania	Latvia	Estonia	Czech Republic	Poland	Sweden
Food products	31%	25%	25%	26%	18%	17%
Clothes	28%	28%	28%	17%	20%	9%
Cigarettes	17%	22%	20%	17%	22%	15%
Auto-repair	23%	18%	19%	9%	17%	11%
Medical, beauty services, hairdressing, massages	25%	24%	13%	8%	9%	6%
Alcoholic beverages	8%	10%	15%	15%	12%	18%
Construction and home renovation	18%	8%	15%	10%	12%	5%
Medicine, food supplements, drugs	17%	12%	9%	5%	6%	11%
Cars and spare car parts	15%	12%	8%	4%	8%	10%
Fuel	12%	12%	8%	5%	11%	8%
Catering and hotel services	9%	9%	8%	9%	7%	10%
Fire wood, wood pellets, coal	13%	12%	10%	6%	4%	4%
Transportation	7%	8%	9%	5%	6%	4%
Household goods, IT and audio-video equipment	6%	7%	9%	4%	6%	7%
Sewing, clothing and shoe repairs	11%	6%	5%	4%	6%	3%
Entertainment	6%	6%	8%	7%	5%	4%
Construction materials	3%	3%	8%	4%	5%	10%
Household services (cleaning, ironing, etc.)	5%	3%	6%	4%	6%	6%
Training and tutoring	6%	3%	5%	4%	9%	3%
Property rent	8%	3%	9%	2%	3%	2%
Gardening and agricultural work	5%	5%	3%	2%	4%	4%
Childcare, sick and elderly care	3%	1%	3%	1%	5%	2%

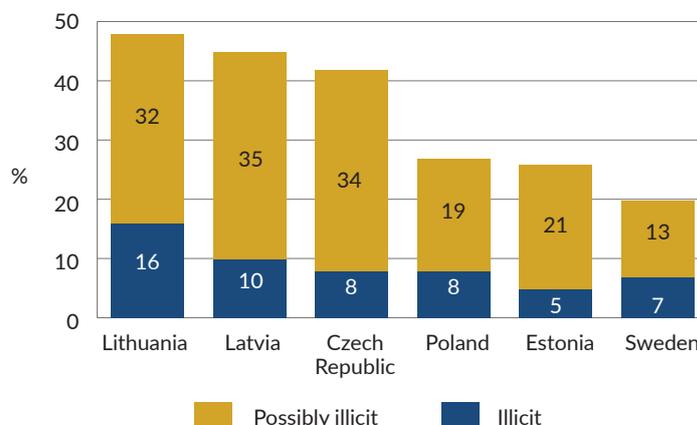
**Fig. 5: Stakeholder survey – In your country, how much of total consumption do you estimate is illicit? (%)**



Source: Oxford Economics (2018)

Such goods might be smuggled into the country illegally, manufactured and sold illegitimately, or bought in other countries for personal use and sold in the home country to other people, which is also illegitimate. Two questions were asked. First, respondents were asked if they had friends or relatives who had bought these goods illegitimately within the last 12 months. Second, they were asked what was the share of such purchases in the total consumption of those goods among their friends and relatives. (Fig. 7 and 8)

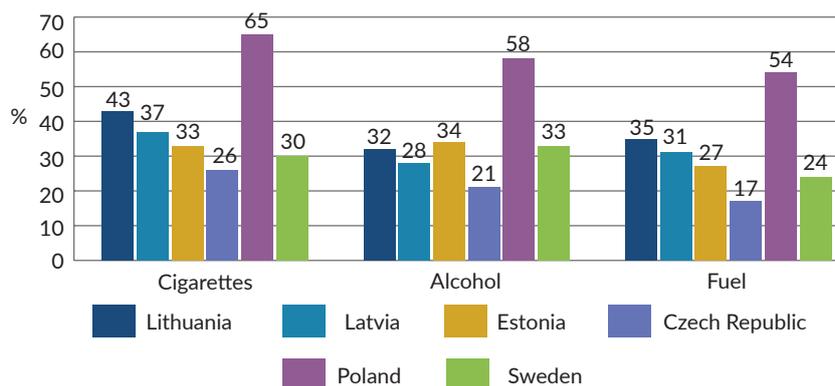
**Fig. 6: Customer survey – how likely are the products that you've purchased been illicit? (%)**



Source: Oxford Economics (2018)

By far, the country with the greatest share of respondents who admitted to having friends or relatives buying illicit cigarettes, alcohol or fuel, was Poland. The figure ranged from 65% to 54%, depending on the type of goods. The incidence is lower in Latvia, Lithuania, Estonia and Sweden, varying between 28% and 43%. On average, cigarettes were the most common category. Alcohol followed, and fuel came third. The country with the lowest share of respondents reporting friends or relatives with illicit consumption of cigarettes, alcohol or fuel was the Czech Republic.

**Fig. 7: Have your friends/relatives purchased cigarettes, alcohol or fuel illegitimately? (% of respondents, 2018)**



consumption levels, 30% for alcohol and 29% for fuel.

average of monthly spending was calculated.<sup>5,6</sup> (Fig. 9)

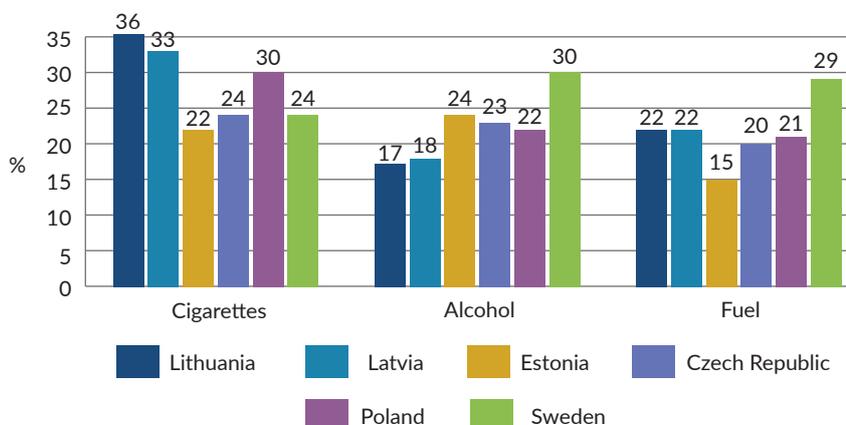
Survey participants were asked to estimate the share of illicit cigarettes, alcohol and fuel in their total consumption of these goods. Among those who consumed illicit, the average share of illicit goods was as high as 36% and 33% for cigarettes in Lithuania and Latvia, respectively. The numbers for alcohol and fuel were on average slightly lower, with Sweden reporting the highest

Respondents were also asked to indicate approximately how much money they spent per month on purchases during the last 12 months from a) legitimate sources when income or purchase was not registered; and b) from illegitimate channels. In order to directly compare monthly expenditures on unofficial purchases in different countries, data on ranges and percentages were transformed, and a weighted

By far the highest average expenditure on illicit purchases was in Sweden, at 235 euro. Poland followed with 112 euro. The amount was similar in the Baltic states and the Czech Republic, varying from

5 Data on ranges and percentages is presented in the appendix.  
 6 Weighted average monthly expenditure is calculated by multiplying the middle of the ranges by the percentage of respondents in each range. The last open range (more than 1000 euro) is taken as 1250 euro. "Don't know" answers are eliminated by distributing the share proportionally to other ranges.

**Fig. 8: What share of these goods among friends/relatives was purchased illegitimately? (% mean, 2018)**

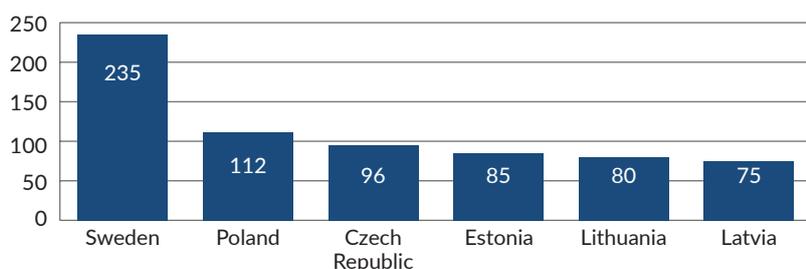


The increase was also sizeable in other countries: 39% in Poland, 32% in Latvia, 25% in Estonia. In Lithuania the increase was relatively small, at 11%.

**Table 2: Increase in average spending on illicit purchases from 2015 to 2018**

Country	Increase
Sweden	163%
Poland	39%
Latvia	32%
Estonia	25%
Lithuania	11%

**Fig. 9: Weighted monthly average spending on illicit purchases (eur, 2018)**



75 euro in Latvia to 96 euro in the Czech Republic. Compared with the 2015 survey, we can see a significant increase in the amount spent on illicit goods. In Sweden, the average spending on illicit

goods increased by a massive 2.6 times. The percentage of respondents in Sweden indicating intervals of lower sums decreased, and those indicating intervals of higher amounts went up significantly.

Several reasons may explain why spending on illicit purchases has increased. First, the overall price level of goods and services, including in the shadow economy, has risen. Second, the level of income has gone up, leading to a growth in general consumption expenditure. Third, in some cases people may have chosen to spend a higher share of their total expenditure on illicit purchases. Different countries may represent different combinations of these reasons.

## DRIVERS OF THE SHADOW GOODS MARKET

Public perceptions of the reasons for illicit purchases<sup>7</sup> are similar in all of the countries surveyed. The high cost of legitimately bought goods and services is considered to be the main reason for

illicit purchases. This opinion was indicated by 89% of respondents in Lithuania, 83% in Estonia, 75% in Latvia, 71% in the Czech Republic, 70% in Poland, and 66% in Sweden. These results show that people perceive the affordability of goods, and the price difference between legitimate and illegitimate goods, as the primary determinant when making a decision whether or

not to buy officially. We can conclude that any measures that increase the price of legitimate products (such as taxation or regulation of goods or services) or reduce the price of illicit products incentivize unofficial purchases. Since 2015, the share of people who think that buying goods and services illicitly is too expensive has increased by 18 p.p. in Lithuania and Estonia,

<sup>7</sup> Survey participants were asked why they thought people purchased goods or services from illegitimate channels or legitimate sources that did not declare their income. Respondents could indicate either one or two reasons as most important.

while Poland, Sweden and Latvia reported increases of 9, 8 and 7 p.p. respectively.

In many cases, buyers either do not know or do not care if sellers are operating illegally, or if they fail to declare their income. Such circumstances are the second most frequent response with regard to public perceptions about the reasons for illicit purchases. The proportion of respondents who indicated this as a reason for illicit consumption varied between 39% in Sweden and 56% in Lithuania. It should be noted that this proportion has decreased significantly since 2015: in Estonia by 13 p.p. (from 58% to 45%), in Latvia by 7 p.p. (from 49% to 42%) and in Poland by 6 p.p. (from 53% to 47%).

The third reason for illicit purchases is that certain goods and services are more widely available on the shadow market. Around one-fifth of respondents in Poland and Estonia mentioned this as the most important reason; in

other countries the share was between 11% and 14%. While in Poland and Estonia this proportion remains unchanged since 2015, in Lithuania the figure has fallen by 11 p.p., and in Sweden and Latvia, by 9 and 8 p.p., respectively. Poor access to particular goods and services in the formal economy ranks as the least important reason for illicit purchases. (Fig. 10)

The study by Oxford Economics (2018) also finds that the most important motivations for illicit trade are those relating to the characteristics of products (price, quality, availability and convenience), rather than to social factors or attitudes concerning illicit trade (there is nothing wrong with doing it; others do it; there is little chance of sanction; or they prefer to buy from unofficial channels). (Fig. 11)

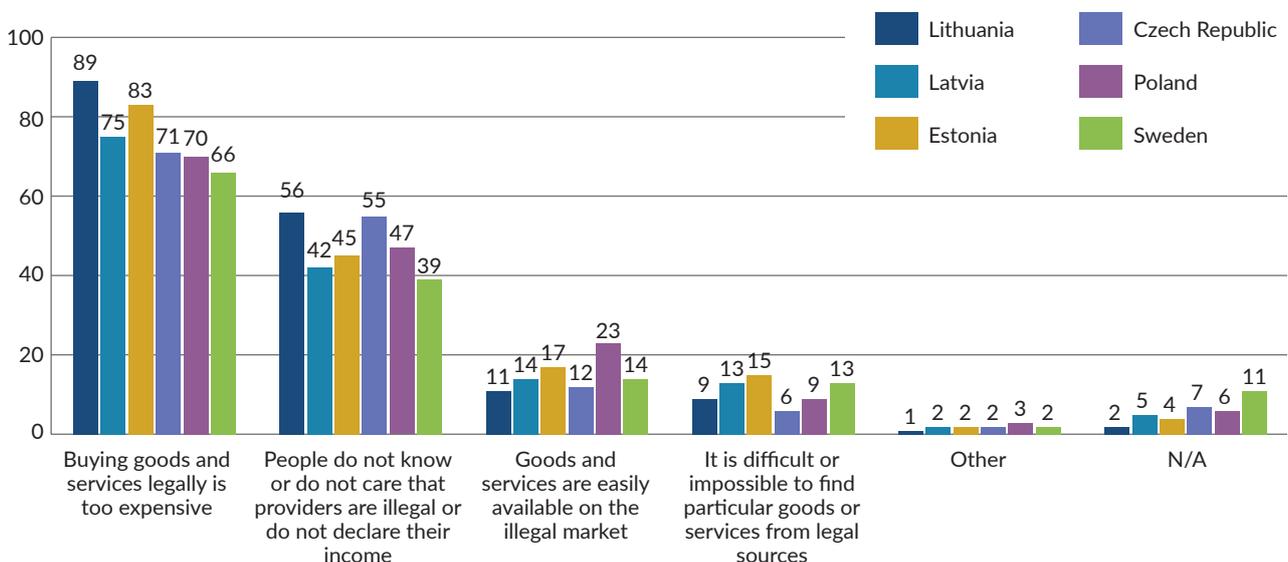
The study groups consumers into four segments, according to their motivations for buying illicit goods:

- Critics buy goods illicitly due to social factors such as believing there is nothing wrong with illicit sources; that there is no chance of getting caught, and that others do it. This segment has experienced faulty and inferior illicit products more than any other group, perhaps explaining why they don't actively seek to purchase goods through illicit channels.

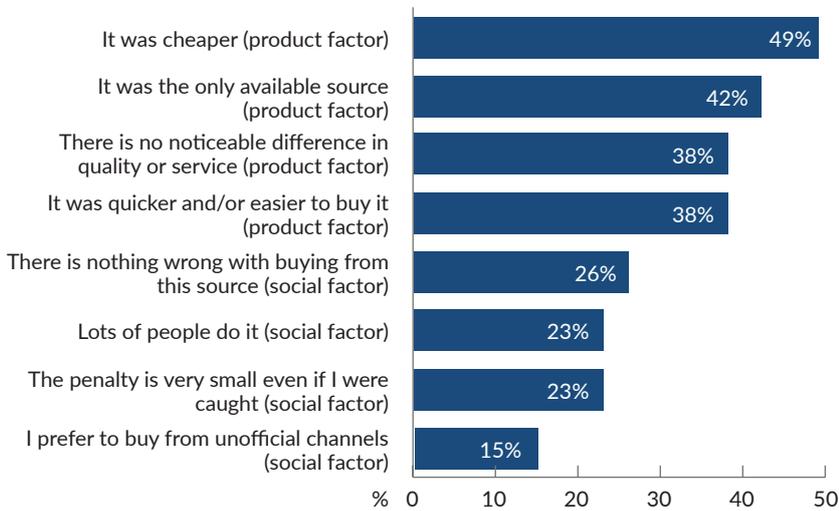
- Activists hold strong opinions concerning social factors. They perceive illicit trade as a victimless crime, and therefore choose decisively to purchase illegitimately. The low chance of detection and view that many people across society engage in illicit trade may embolden activists to pursue illicit avenues.

- Opportunists are motivated to purchase illicit goods by product factors such as price, quality and accessibility. They buy illicit goods as the opportunity to do so presents itself, rather than by

**Fig. 10: Reasons for illicit purchases (% , 2018)**



**Fig. 11: Please rate the importance of each of the following factors in buying potentially illicit goods from unauthorised sources (“Important” and “Very important” responses)**



Source: Oxford Economics (2018)

actively seeking them out. This group, more than any other, finds that illicit goods are available at lower prices than legitimate alternatives.

- Bargain Hunters prioritize pursuing better deals, resulting in their engagement with illicit products. Quality, availability and price are their main drivers, which bargain hunters say are

just as accessible in illegitimate markets. Indeed, more than any other group, they insist that illicit markets offer identical products and significantly lower costs. (Fig. 12)

The distribution of these customer segments varies widely across the countries investigated in our survey. In Lithuania and Sweden,

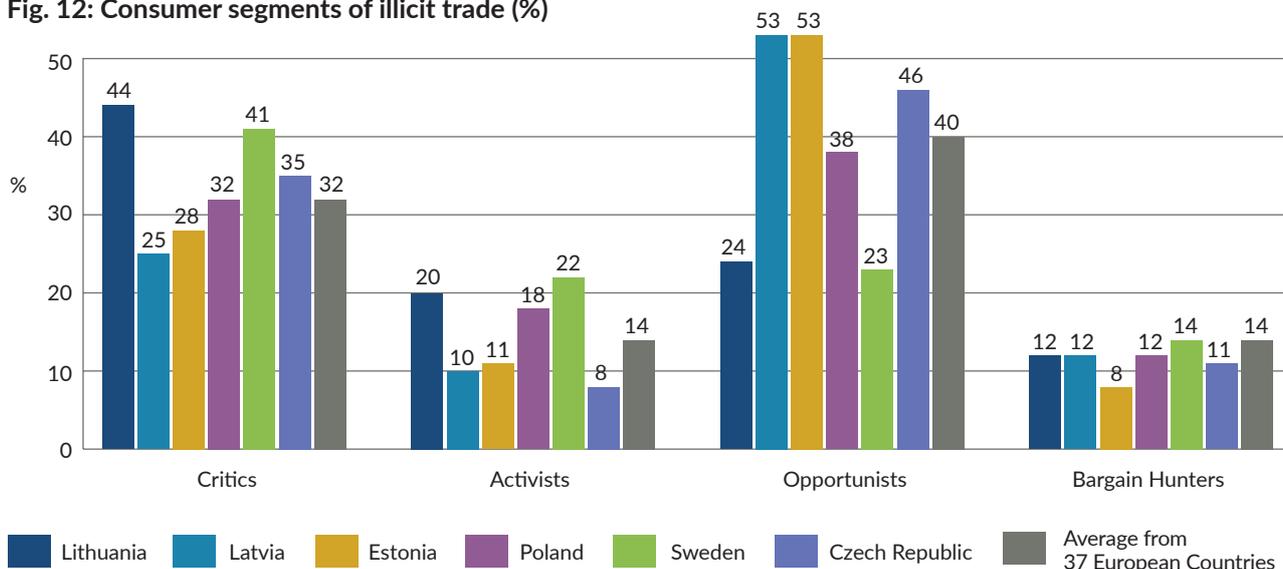
critics constitute the biggest segment, whereas most consumers of illicit goods and services in Latvia, Estonia and the Czech Republic are opportunists. Poland has a similar share of critics and opportunists. These two segments share a key characteristic: buying illicit goods mostly as opportunities present themselves, rather than actively seeking illicit goods.

### Taxes and affordability of goods

The taxation of goods and services makes them more expensive and creates differences between the prices of legitimate and illegitimate sales. Such differences in price create incentives to purchase cheaper illicit goods.

In general, the largest tax on goods and services (or consumption) is value-added tax (VAT). Its rate varies across the countries investigated. In 2018, VAT was the lowest in Estonia,

**Fig. 12: Consumer segments of illicit trade (%)**



Source: Oxford Economics (2018)

at 20%. In the Czech Republic, Lithuania and Latvia, the VAT rate was 21 percent. The highest rates of VAT were in Poland with 23% and Sweden with 25%.

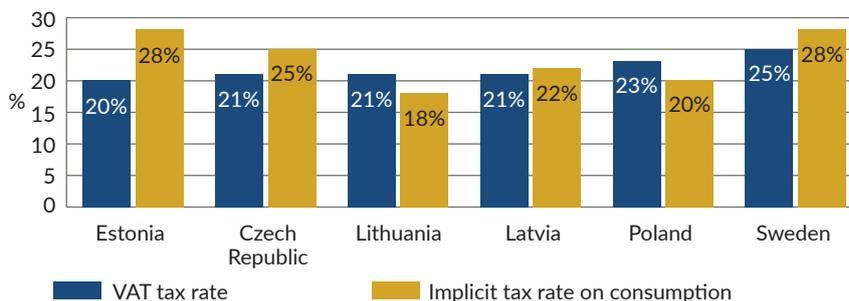
The European Commission (2018d) calculates the implicit tax rate (ITR) on consumption, which is defined as the ratio of the revenue from all consumption taxes (VAT, excise taxes on tobacco, alcohol, energy and others) to a household's total consumption expenditure. (Fig. 13)

According to Putniņš and Sauka (2015a), reducing dissatisfaction with the tax system is likely to decrease the size of the shadow economy. They argue that addressing this issue could involve actions such as making tax policy more stable (fewer changes to procedures and tax rates), making taxes more "fair" from the perspective of businesses and employees, and increasing transparency over the way in which taxes are spent.

Taking into consideration all consumption taxes paid by consumers, the tax burden varies quite significantly across the countries under analysis. In 2018, the highest ratio of taxes to consumption was in Estonia and Sweden, at 28%. In the Czech Republic it was slightly lower, at 25%. In Latvia and Poland, the ratio stood at 22% and 20%, respectively. At 18%, the lowest implicit tax rate was to be found in Lithuania.

An interesting link exists between tax rates and the affordability of goods in the countries under analysis. In some of the countries, tax

**Fig. 13: VAT rate and implicit tax rate on consumption (% , 2018)**



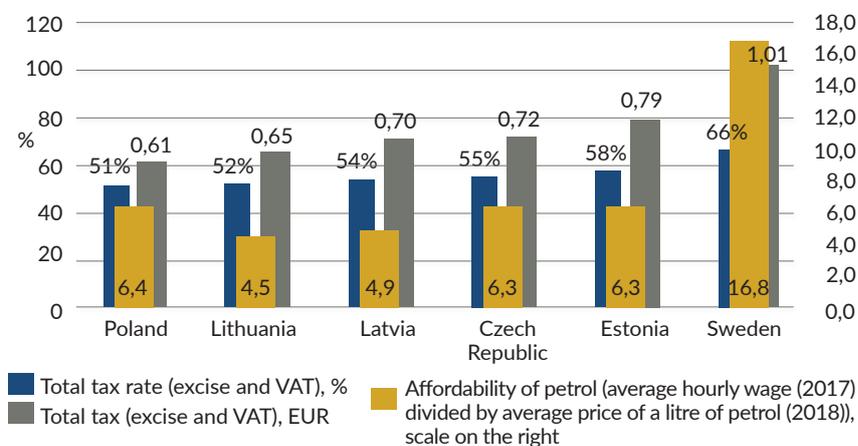
Source: European Commission (2018d)

rates are lower in relative terms, but the affordability of goods, i.e. the quantity of goods that can be bought with an average income, is nevertheless low. At the opposite end of the spectrum, the countries with relatively high taxes are not necessarily those in which goods are least affordable. (Fig. 14)

Consider the categories of goods where the tax rate has the greatest impact: fuel, alcohol and tobacco products. Taxes (VAT and excise tax) constitute a large portion of the retail price of petrol. It varies from 51% in Poland to 66% in Sweden. Taxation of these goods is therefore one of the primary determinants of their

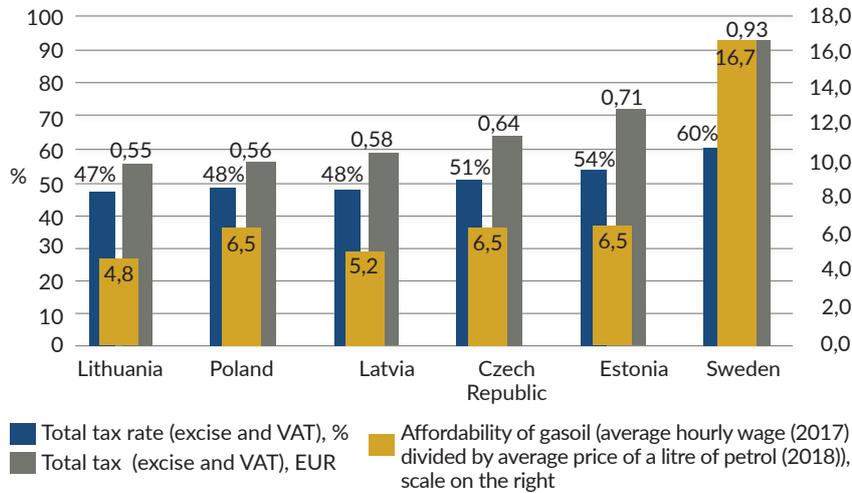
price in the formal economy and, consequently, one of the main drivers of the shadow goods market. However, the effective tax rate, or the ratio of tax to the final price, does not tell the whole story. Significant differences in income levels between countries can mean that these goods are still more affordable in countries where they are more highly taxed. This is clearly demonstrated by comparing Lithuania and Latvia with the Czech Republic, Estonia and Sweden. Even though the effective tax rate in the Czech Republic, Estonia and especially Sweden is higher than in Lithuania and Latvia, petrol is still more affordable in the former group of countries. Despite higher

**Fig. 14: Taxes and affordability of petrol**



Sources: European Commission (2018b), Eurostat (2018b)

**Fig. 15: Taxes and affordability of diesel**



Sources: European Commission (2018b), Eurostat (2018b)

taxes, people in these countries can buy more petrol with an average income. An average hourly wage can buy 17 litres of petrol in Sweden, 6 litres in the Czech Republic and Estonia, but only around 5 litres in Latvia and Lithuania. The same analysis applies to diesel fuel) in the aforementioned countries. (Fig. 15)

The likelihood of illicit fuel purchases is comparatively higher in those countries

where taxes are high and these goods are less affordable. The scatter plot below shows that the taxation of petrol and diesel follows a general pattern: in countries where the affordability is lower, the tax rate is also lower. This is especially true when we consider Sweden against the other countries. (Fig. 16)

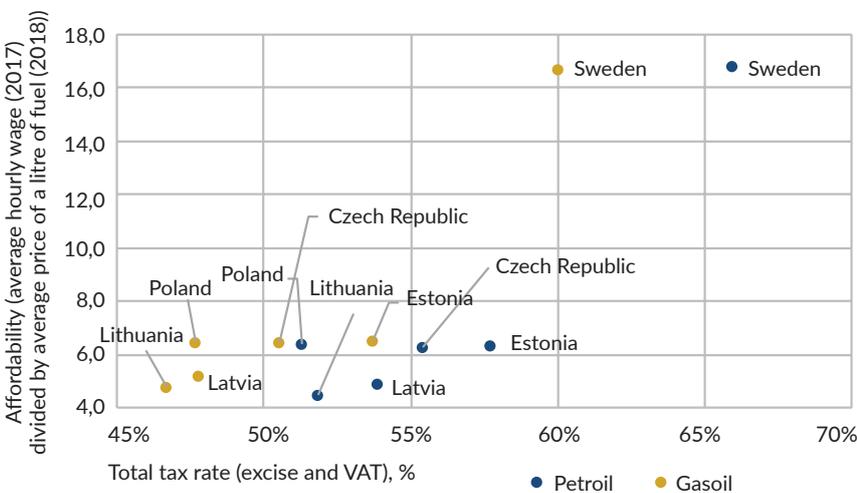
This does not mean that the tax rate is irrelevant for a consumer's decision to

look for cheaper goods in the shadow economy. It simply suggests that in order to explain the effect of taxation on the shadow market, the level of income and the affordability of goods must also be taken into account. Higher taxes in high-income countries may stimulate less undeclared activity, because people in those countries can afford to pay higher taxes and higher prices. Conversely, even in countries where the tax rate is lower, these lower taxes may still incentivize illicit purchases because lower income levels make people in these countries more price-sensitive. (Fig. 17)

The case of cigarettes is even more compelling. The total tax rate levied on cigarettes (excise tax plus VAT) is the lowest in Sweden (74%), and the highest rate is to be found in Estonia (86%). In spite of this, the total amount of tax paid on a pack of cigarettes is by far the highest in Sweden (4.3 euro out of an average price per pack of 6 euro). In the other countries, the total tax paid on a pack of cigarettes is much lower: between 2.5 and 2.6 euro in the Czech Republic, Lithuania, Poland and Latvia, and 3 euro in Estonia. This shows that the tax rate is not always the most accurate measure of the tax burden. Taxation of cigarettes contains an element that is connected to the price of cigarettes (the so-called 'ad valorem' component of excise). This makes taxation more sensitive to the country's price level.

We can elicit from these figures a similar tendency to that seen with fuel consumption; namely, that the level of taxation exerts a varying effect on the shadow

**Fig. 16: Tax rates and affordability of petrol and diesel**



Sources: European Commission (2018b), Eurostat (2018b)

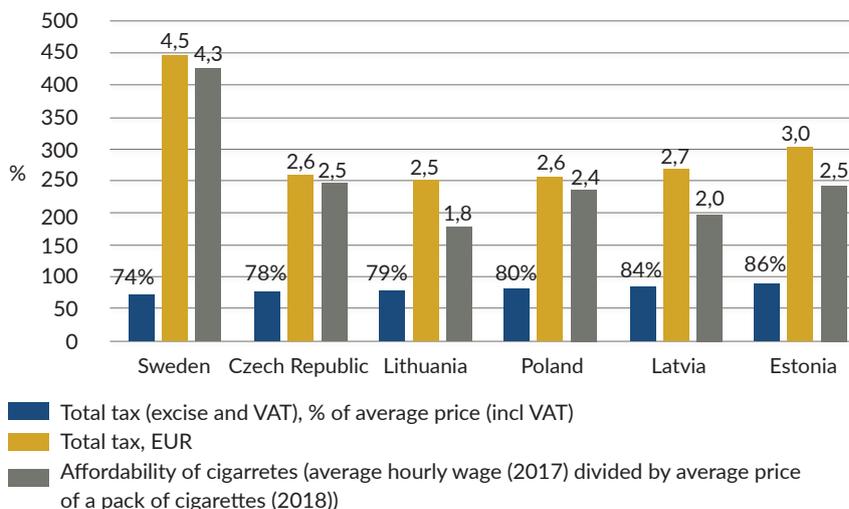
economy in different countries, due to differences in income levels and the affordability of goods. Cigarettes are most affordable in Sweden (an average hourly wage can buy 4.3 packs of cigarettes) and least affordable in Lithuania and Latvia (where an average hourly wage buys 1.8 and 2 packs, respectively). This is in spite of the fact that the total amount of tax in euro paid on a pack of cigarettes is much higher in Sweden than in either Lithuania or Latvia.

The scatter plot of taxation and the affordability of cigarettes shows that the three Baltic states are in what we can call the 'risk zone' of the shadow economy, because cigarettes in these countries are less affordable, while the total tax rate on cigarettes is relatively high compared to the other countries. (Fig. 18)

The level of tax levied on ethyl alcohol in the countries under analysis also presents an interesting picture. The lowest level of tax on ethyl alcohol is in the Czech Republic (11 euro per litre of pure alcohol); the highest is in Sweden (54 euro). Interestingly, these are the two countries in which ethyl alcohol is most affordable.<sup>8</sup> Ethyl alcohol is least affordable in Lithuania, Latvia and Estonia, due to a combination of higher taxes (compared to the Czech Republic or Poland) and lower income (compared to Sweden). Again, this illustrates that the tax burden on the formal market and

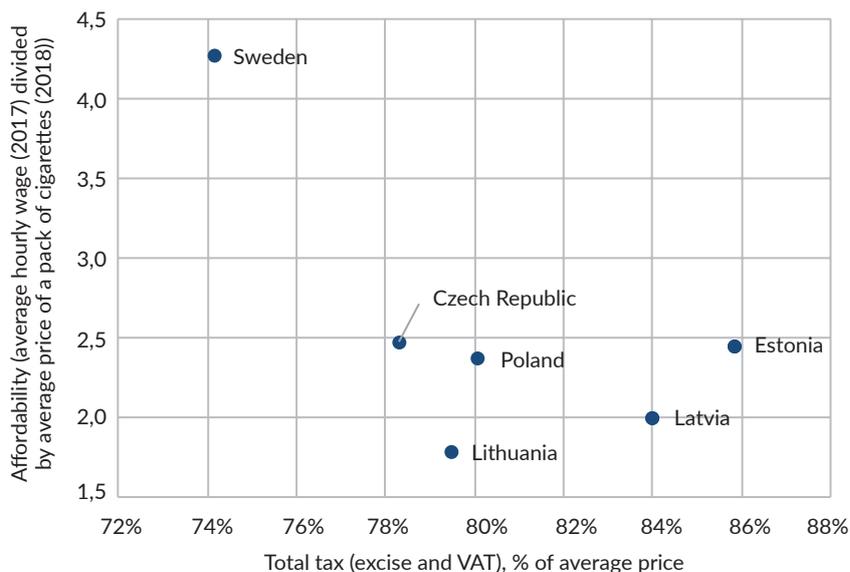
<sup>8</sup> Affordability of ethyl alcohol is calculated as the average hourly wage (2017) divided by excise tax per 1 litre of alcohol (2018). Therefore, technically it is not the affordability of alcohol drinks, but the ability to pay excise tax on strong alcoholic drinks.

**Fig. 17: Taxes and affordability of cigarettes**



Sources: European Commission (2018c), Eurostat (2018b)

**Fig. 18: Tax rates and affordability of cigarettes**



Sources: European Commission (2018c), Eurostat (2018b)

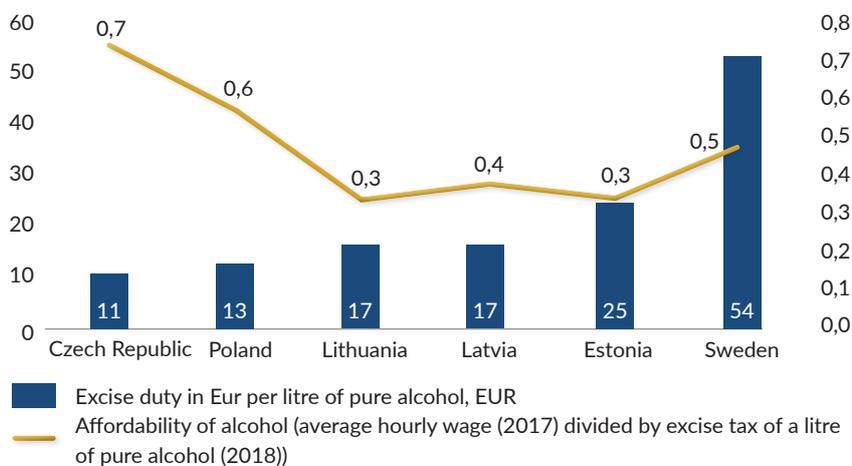
consumers differs depending on the average income level within a country. (Fig. 19)

The scatter plot of taxes and affordability in case of strong alcoholic drinks (see below) shows that although the affordability is not the highest in Sweden, the taxation of ethyl alcohol is. Taxation is also fairly

high in Estonia, which is one of the countries among those analysed where alcoholic drinks are least affordable. These two countries are therefore in the higher risk zone for the shadow market to emerge. (Fig. 20)

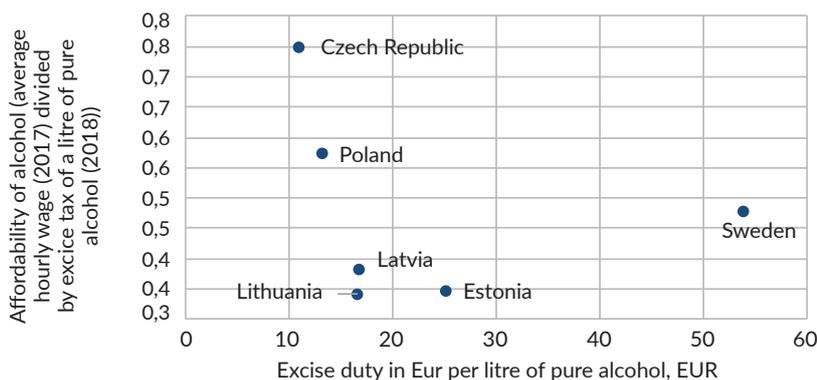
The affordability of goods in general is related to the level of income in the economy,

**Fig. 19: Taxes and affordability of alcohol**



Sources: European Commission (2018a), Eurostat (2018b)

**Fig. 20: Taxes and affordability of strong alcohol (beer or wine excluded)**



Sources: European Commission (2018a), Eurostat (2018b)

which in turn is influenced by productivity and economic conditions. A general tendency exists that when economies and income levels grow, legitimate goods and services become more affordable and therefore preferred by market participants. As a result, the shadow economy shrinks. An important consideration when analysing the shadow economy is how quickly people fall back in case of economic hardships that come with the loss of jobs, lower income, and a falling affordability of goods and services.

A reduction in the level of incomes, a worsening financial situation or the loss of a job may incentivize illicit consumption.<sup>9</sup> As many as one in two people in Lithuania say they would consider buying cheaper goods from unofficial sources or legitimate providers who do not declare their revenues, if their financial

<sup>9</sup> Survey respondents were asked whether they would consider participating in the shadow market if their income dramatically decreased and their financial situation severely worsened (e.g. if they lost their job and could not find another one, or their income decreased because of an economic crisis).

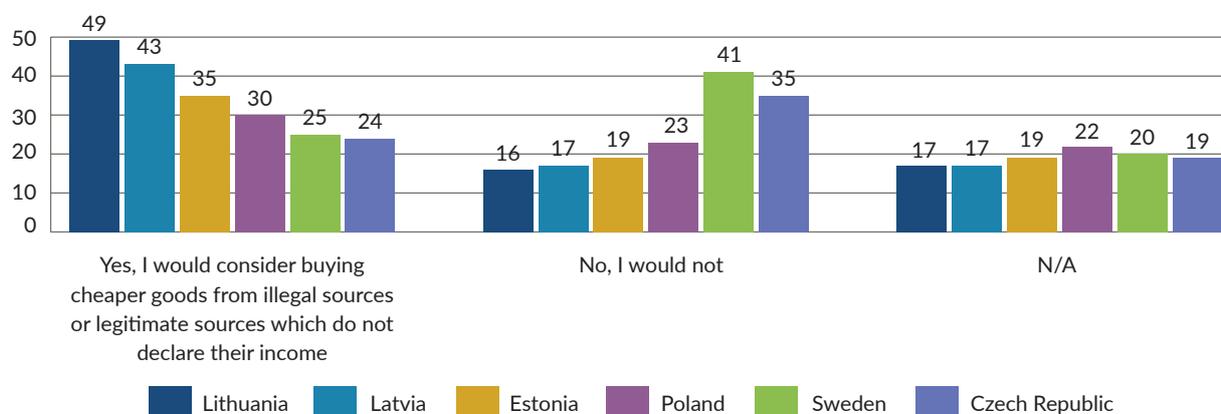
circumstances worsened. This share is lower in the other countries under analysis, but still fairly high in Latvia (43%), Estonia (35%) and Poland (30%). In Sweden and the Czech Republic, one in four would consider turning to the shadow goods market. These are large proportions of the population, especially in the Baltic states, and they raise questions as to the stability of the formal economy and the potential of the shadow market in case of economic decline. (Fig. 21)

Periods of high economic growth and prosperity do not represent the whole picture. Economic policies, especially those involving tax increases or stiffer regulations (which present greater incentives to illicit trade) should not be designed and implemented solely on the basis of favourable economic conditions. Proper consideration should be given to their likely implications for the development of the formal economy – and for the shadow economy, in case of economic difficulties.

## Regulation and the business environment

Putniņš and Sauka (2015a) suggest that policy makers should also think in broader terms. Not just about tax policy, but about improving the overall business climate, as this would make involvement in illicit activities less appealing. This suggests that the shadow economy not only depends on people's choices to buy illegitimately,

**Fig. 21: If your income dramatically decreased and your financial situation severely worsened, would you consider participating in the shadow goods market? (% , 2018)**



but also on the readiness of companies to engage in shadow markets. According to the World Bank (2019) Doing Business Index, Sweden ranks highest out of all the countries investigated in terms of business conditions (12<sup>th</sup> among 190 countries globally). Lithuania, Estonia and Latvia rank 14<sup>th</sup>, 16<sup>th</sup> and 19<sup>th</sup>, respectively. Poland and the Czech Republic lag behind in 33<sup>rd</sup> and 35<sup>th</sup> positions.

A survey on undeclared work published by the European Commission (2014) also offers valuable insights about the reasons why people buy undeclared goods. Just like our survey, this report suggests that prices and taxes are the main determinant for buying illicit goods. It was found to be the most common reason for buying undeclared goods in all countries. The study from the European Commission offers another interesting finding. As many as 37% of respondents in the Czech Republic, 28% in Estonia and 27% in Lithuania claimed they received a faster service from undeclared transactions. (Fig. 22)

In addition, 28% of respondents in Latvia and 25% in the Czech Republic claimed that they received better quality goods or services when buying them undeclared. There may be many reasons why people perceive undeclared goods or services to be faster or better. Some may pertain to the regulation of the legal market and various restrictions on selling products legitimately, which customers may find inconvenient (e.g. restrictions on retail opening hours or the sale of certain goods, limitations on product information, restrictions on product choice, etc.). The Nanny State Index, published by the Epicenter Network (Snowdon, 2017), ranks EU countries according to how restrictive and paternalistic their policies are on the sale of food, tobacco and alcohol products. The 2017 Nanny State Index finds Sweden to be the most restrictive country among those covered by our analysis (5<sup>th</sup> place among 28 EU member states). Latvia, Lithuania and Poland follow (in 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> places respectively). Estonia ranks 14<sup>th</sup>, while the Czech

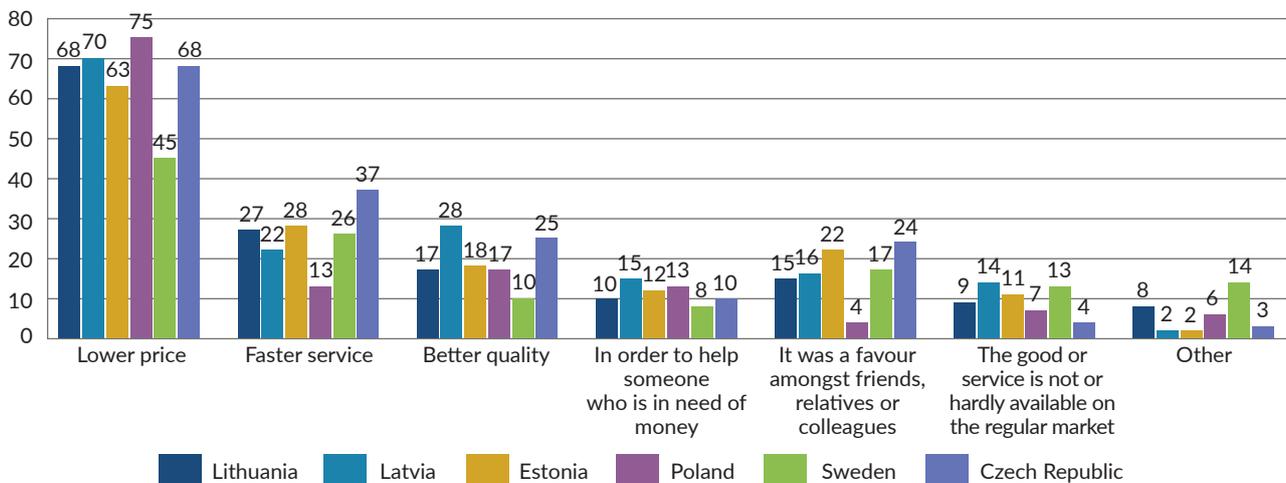
Republic is found to be the least restrictive in the whole European Union (28<sup>th</sup> place).

## Justification

As previously mentioned, it is common for participants in the shadow goods market to either not know or not care whether sellers are unauthorised or if they are legitimate but simply do not declare their revenues. One of the reasons why people may not care about this is the justification of illicit trade.

The justification of illicit purchases is an important factor that influences readiness to buy unofficially. The level of justification of a certain undeclared economic activity can be interpreted in several ways. Firstly, it shows how conducive the conditions are to the operation of the shadow economy. The more justification a society displays for a certain activity, the easier it is for people to participate in it. A high level of justification can also be interpreted as showing the degree to which people actually engage

**Fig. 22: Out of the following factors, which made you buy goods undeclared instead of on the regular market? (% , 2018)**



Source: European Commission (2014)

in the shadow economy. The greater the number of people participating in the shadow economy, the higher the degree of justification of these activities is, due to personal experience. This may be interpreted as a dangerous positive feedback loop. A wider incidence of the shadow economy leads to more justification, and more justification may create better conditions for the shadow economy.

Of the countries analysed, people in Latvia and Lithuania are most likely (41% and 37%, respectively) to either completely justify or tend to justify the purchase of goods or services from an official retailer when they know that the payment is not declared. In the other countries, people justify undeclared purchases to a lesser degree: 31% of respondents in Estonia, 29% in the Czech Republic and 28% in Sweden. Poland has the lowest justification level of all, at 23%. The current survey shows two significant changes compared with 2015: the rate of justification has increased by 4 p.p. in Sweden

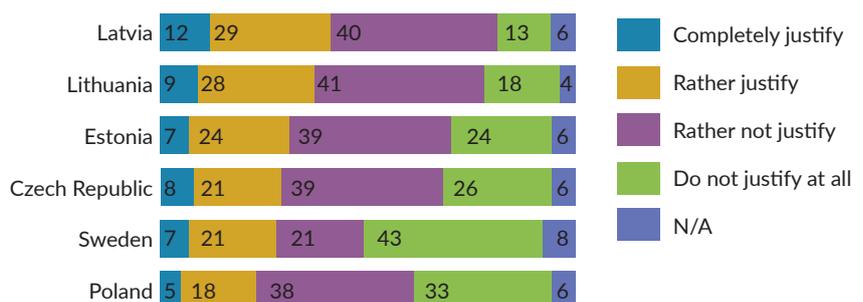
and decreased by 5 p.p. in Poland. As in the other cases, justification correlates with the actual incidence of unregistered payments: respondents in Latvia and Lithuania reported the highest rates of justification and participation, while those in Sweden and Poland, the lowest. (Fig. 23)

Engagement in the smuggling, illegal production or sale of cigarettes, alcohol products or fuel is justified to a lesser extent in all six countries, compared with all other types of shadow activity under analysis. In fact, half or more of respondents in all six countries tend not to justify or do not justify them at all. The justification

rate for the smuggling, illegal production or sale of cigarettes, alcohol products or fuel is the highest in Lithuania and Latvia, with a positive response from 18% of respondents in each country. Estonia, Sweden and Poland come next with 15% or 14%. The Czech Republic recorded the lowest level of justification (10%). Compared with the 2015 survey, the degree of justification has decreased by 3 p.p. in all countries surveyed except for Sweden, which reported a 2 p.p. increase. (Fig. 24)

The fact that people justify smuggling and illegal production or sale of these goods to a much greater

**Fig. 23: Justification for purchasing from a legal vendor when you know your payment will not be declared (% , 2018)**



degree than they do transactions without a receipt may suggest several things. First, undeclared purchases suggest simply being a customer, while smuggling or illegal production or sale of these goods is often associated with engagement in organized crime. Also, illegitimate sales are usually more punishable than buying. Second, buying without a receipt is more common among respondents than buying from unregistered sellers, so the difference in justification may reflect personal biases. Third, differences in the level of justification suggest that people may categorise the shadow goods economy into two segments: justifiable and non-justifiable. There may be some economic reasoning behind this: it is riskier to purchase goods from unauthorized sellers than it is from legitimate sources without taking a receipt. Legitimate channels are subject to licensing and other quality assurance measures, while illegitimate ones avoid them. Thus, unauthorised sources may be selling products of poorer quality or may even harm consumers. In addition, justification may simply be related to the degree of the illegitimacy: the more illicit a certain activity is (as in the case of illegal production or sale of excise goods), the less justifiable it is seen to be.

The Czech Republic's so-called 'methanol affair' in 2012 concerned illegal production of alcohol, with producers adding harmful alcohol during the production process. Consumers who drank this defective spirit suffered serious health

**Fig. 24: Justification for engagement in the smuggling, illegal production or sale of cigarettes, alcohol products or fuel (% , 2018)**



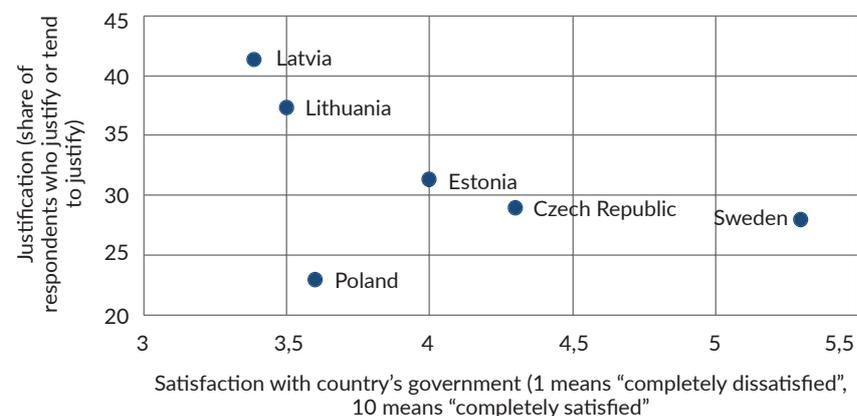
problems: 48 people died, and more than a hundred people suffered permanent health consequences (blindness, for example). This affair led to a temporary prohibition on all alcohol and the subsequent prosecution of 31 people, of whom two were sentenced to life imprisonment and others received between 7 and 15 years in prison. Czech police confiscated more than 15,000 litres of harmful spirits (Respekt, 2018).

Justification for shadow activities may involve different dimensions. On the one hand, greater or lesser justification may reflect public perceptions as to how bad and harmful

the shadow activity is. On the other hand, justification may also relate to whether or not regulatory policies are perceived as just. If government policies (e.g. tax or excise policy) are seen as unfair, people are more likely to bypass those unfair policies and engage in shadow activities. People do not perceive this as a 'real' crime, but rather as a circumvention of unjust policies: a cost-saving decision. (Fig. 25)

This can be illustrated by using the connection between justification of shadow activities, and the level of satisfaction with a country's government. Except for

**Fig. 25: Satisfaction with the country's government and justification for buying from a legitimate source without a receipt**



Poland, average satisfaction<sup>10</sup> with government correlates with public justification for purchases without a receipt. A higher satisfaction with the government (and government policies) leads to a lower justification of shadow activities.

The extent to which people feel sympathetic towards their government, and are satisfied with public services, may influence their participation in the shadow economy. A sense of belonging to the local community or to the nation may be another relevant factor.

Overall, respondents view the importance of belonging to the country's community as rather high. People in Lithuania on average evaluate the importance of feeling part of the Lithuanian community at 7.8 on a scale from 1 to 10, (Fig. 26) where 1 means "not important at all" and 10 means "very important". The lowest estimate, 6.9, was reported by respondents in Latvia. In fact, the largest share of respondents in all countries under analysis answered this question with a 10. (Fig. 26) With regard to this, we note Mickiewicz,

<sup>10</sup> People were asked how satisfied they were with the government on a scale from 1 to 10 (where 10 means "very satisfied" and 1 means "completely dissatisfied.")

Rebmann, and Sauka (2017), who suggest that "owner-managers may be critical of the ways the tax administration functions, how the money they earn and contribute is handled and spent by the government, observe non-compliance around and yet their tax morale may still hold up due to their sense of belonging to the polity and identification with the wider community."

### Likelihood of detection and punishment

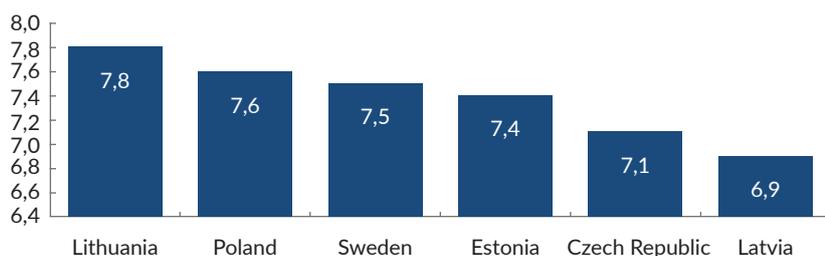
Traditionally decisions to pay or not to pay taxes have been understood using the 'expected utility' framework, in which the extent of an individual's tax evasion is a function of their evaluation of the risk of being caught evading, and the severity of punishment if caught (Allingham & Sandmo, 1972; Yitzhaki, 1974). In line with this notion, we analysed public perceptions as to the likelihood of being detected while engaging in the shadow goods market, and perceptions as to the severity of punishment if caught.

The issues regarding the respondents' perception of the

likelihood of being detected, as well the punishment if caught for illicit purchases, were split into two questions. First, survey participants were asked to rate their perception of the likelihood of being caught purchasing from unauthorized sources. Second, they were asked about the likelihood of being detected while engaging in smuggling (contraband) or illicit production or consumption of cigarettes, alcohol products and fuel.

The perceived likelihood of being caught purchasing from an illicit source is the highest in Sweden, where 53% of respondents believe it is either very high or quite high. In the Czech Republic and Poland this proportion is lower, at 46%, and a similar percentage of respondents think the likelihood of being detected is quite low or very low. In Estonia, Latvia and Lithuania the likelihood of detection is thought to be much lower: only 31%, 28% and 25% of respondents, respectively, perceive it to be very high or quite high, with twice as many people regarding it as quite low or very low. In the Baltic states, this tendency goes hand in hand with a higher rate of justification for shadow purchases and a higher share of respondents who admit that they have made undeclared purchases. The perceived likelihood of being detected remains unchanged in Latvia or Estonia since 2015, but has increased by 4 p.p. in Lithuania and Poland. The biggest change was recorded in Sweden, where the proportion of people who think that the likelihood of being detected is very high or quite high has decreased by 18 p.p. (from 71% to 53%). (Fig. 27)

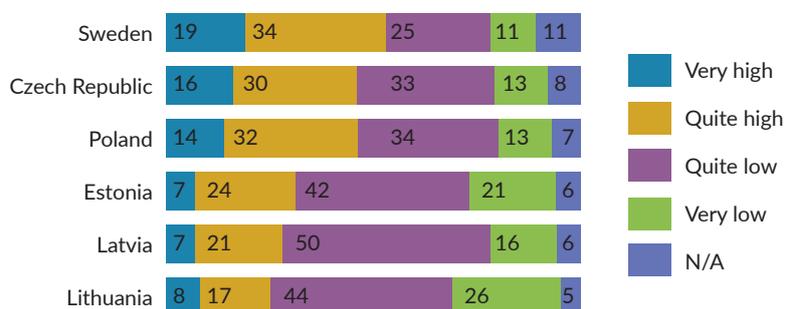
**Fig. 26: How important to you is belonging to your country's community? (mean score, 2018)**



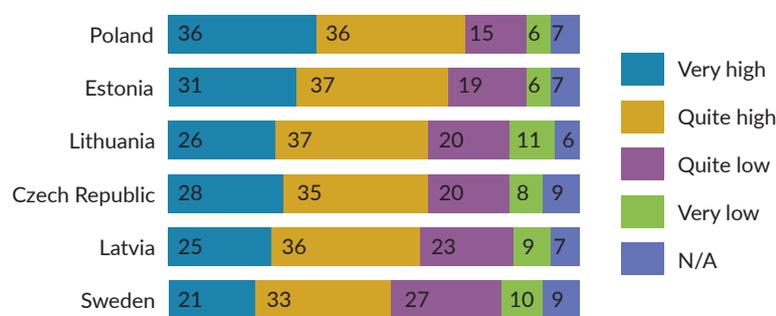
On a scale from 1 to 10, where 1 means "not important at all" and 10 means "very important"

On average, the perceived likelihood of being detected was higher for smuggling and illicit production or consumption of goods subject to excise duties than it was for purchases from illicit sources. This may reflect a greater emphasis on the official strategies against illicit activities with excise goods. The perceived likelihood of being detected while engaging in these activities was the highest in Poland and Estonia, where around seven out of 10 respondents (72% and 68%, respectively) believed it was very high or quite high. Lithuania and the Czech Republic came next, with 63% each. In Latvia, the rate was 61%. In Sweden, perceived likelihood was the lowest: only 54% believed it was very high or quite high. In all countries, the share of people who believed that the likelihood of being detected was very high or quite high was considerably greater than the share of those who believed it was very low or quite low. Since 2015, the perceived likelihood of being detected has increased in Estonia, Lithuania, Latvia and Sweden (by 8, 7, 5 and 4 p.p., respectively) and has remained the same in Poland. (Fig. 28)

**Fig. 27: Likelihood of being caught purchasing from unauthorized sources (% , 2018)**



**Fig. 28: Likelihood of being caught in the smuggling (contraband) or illicit production and consumption of cigarettes, alcohol products or fuel (% , 2018)**



**Fig. 29: Perceptions of punishment for purchasing from unauthorized sources (% , 2018)**

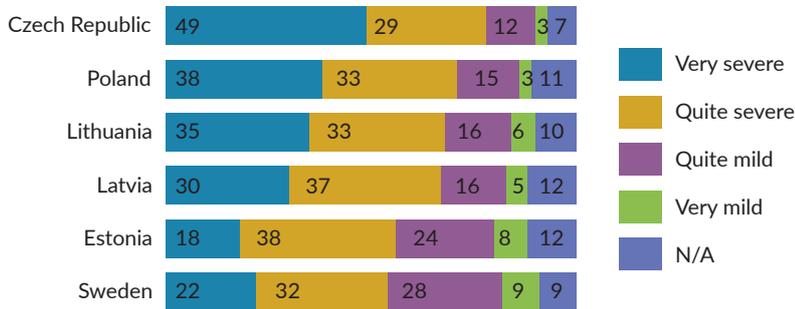


The perception of punishment in all countries follows the same pattern. More people perceived punishments for smuggling or the illicit production or consumption of cigarettes, alcohol products or fuel to be severe, in general, than punishments for illicit purchases. The highest proportions of respondents who believed that the punishment for

illegitimate purchases was very severe or quite severe were in the Czech Republic, Poland and Sweden (57%, 51% and 44%, respectively). In Latvia, Estonia and Lithuania the share was lower: about one in three. According to the survey, people in the Baltic states think that the likelihood of being detected

for illicit purchases is quite low, and the punishments are quite mild. Compared to 2015, perceptions of the severity of punishment have decreased in Lithuania and Latvia (by 7 and 2 p.p. respectively) and increased in Sweden, Estonia and Poland (by 8, 4 and 3 p.p., respectively). (Fig. 29)

**Fig. 30: Perception of punishment for smuggling or illicit production and consumption of cigarettes, alcohol products or fuel (% , 2018)**

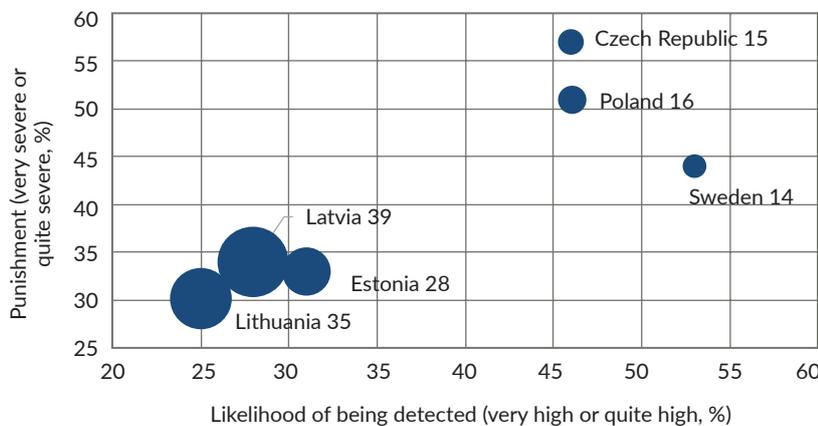


Punishments for smuggling or the illegal production and consumption of cigarettes, alcohol products or fuel are considered to be a lot more severe by people in all six countries, compared to those for purchasing from illicit sources. In the Czech Republic, as many as eight in ten people (78 percent) rated it as very severe or quite severe, and only 15% believed it to be quite mild or very mild. In Estonia and Sweden, 56% and 54% of respondents respectively believed punishments were very severe or quite severe, and around one-third of respondents

believed they were quite mild or very mild. (Fig. 30)

The scatter plot of punishment and the likelihood of being detected in the case of purchases from unauthorized channels that do not pay taxes suggests that both the likelihood of being detected and the severity of punishment are important. In the Baltic states, where the incidence of purchasing from illegitimate sources is relatively high, the perception of punishment and the likelihood of getting caught are lower, relatively, than in the Czech Republic, Poland or Sweden. (Fig. 31)

**Fig. 31: Punishment, likelihood of being detected and incidence of purchases from illicit sources**



Bubble size represents percentage of respondents with experience of purchasing from illegal sources.

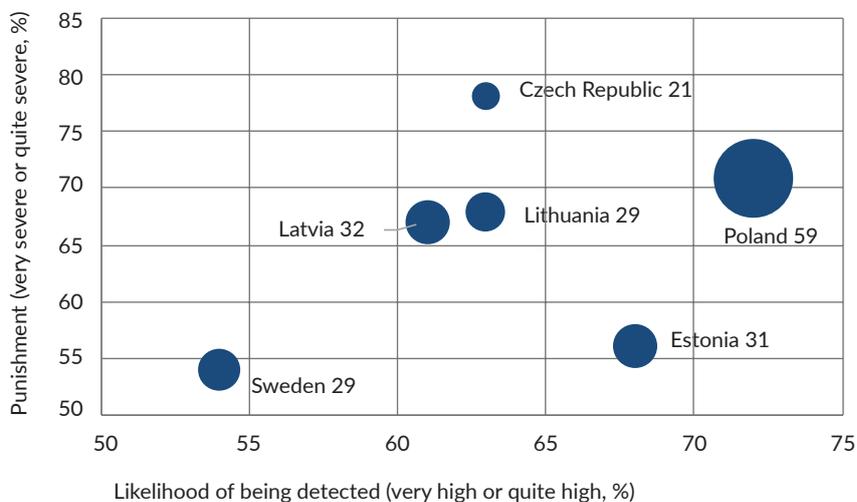
Among all the countries analysed, respondents in the Czech Republic perceived the punishment for participating in the shadow goods market to be the highest. As mentioned above, control of the shadow goods market is now quite strict in the Czech Republic. In 2016, the Customs Administration of the Czech Republic performed 450 inspections of imported goods, 388 of which were positive. The leakage detected (in taxes, duties and fees) amounted to more than 95 million Czech crown. The potential fine for selling illicit alcohol products in the Czech Republic can amount approximately to 194,500 euro; for selling and storing cigarettes without an official stamp, to 38,800 euro; and for purchasing cigarettes without an official stamp, to 5,800 euro (the last of these being equal to approximately five times the average monthly Czech wage). But excise tax in the country almost triples the price of cigarettes. Many Czech smokers, especially those on lower-incomes, still buy cheaper cigarettes and run the risk of being caught. (Fig. 32)

In the case of the illicit production or consumption of cigarettes, alcohol products or fuel, no clear pattern or connection exists between punishment, detection and the incidence of people who have friends or relatives with experiences of illicit consumption. For example, in Sweden respondents perceived the punishment and detection rates to be low, but the incidence of people with

friends or family involved in illicit consumption is also low. In Poland, the situation is the opposite: respondents perceived punishment and detection to be high, while the incidence of shadow consumption among friends and relatives was the highest.

This suggests that government actions focusing on the detection and punishment of participants in illicit markets may have a limited effect where the potential gain or profit from illicit activity is high, a factor that invariably depends on tax and regulatory restrictions in the formal economy.

**Fig. 32: Punishment, likelihood of being caught smuggling or for illicit production or consumption of cigarettes, alcohol products or fuel**



Bubble size represents percentage of respondents who report having friends/relatives with experience of the illegal consumption of cigarettes, alcohol products or fuel.

## THE SIZE OF THE SHADOW LABOUR MARKET

In this survey, undeclared work is defined by two categories: (i) working with a legal job contract, when part of the wage is received as an “envelope wage”; and (ii) working without a legal job contract, when the entire wage is received as an “envelope wage.”

Because shadow employment is a sensitive topic and people may be unwilling to discuss their experiences in detail, survey participants were first asked to answer a number of questions about the undeclared work experience of their friends and relatives. Questions about their own experiences followed. The broader category of “friends and relatives” is a proxy indicator. It allows respondents to distance themselves from the sensitive issue of shadow employment, and to be more open and honest

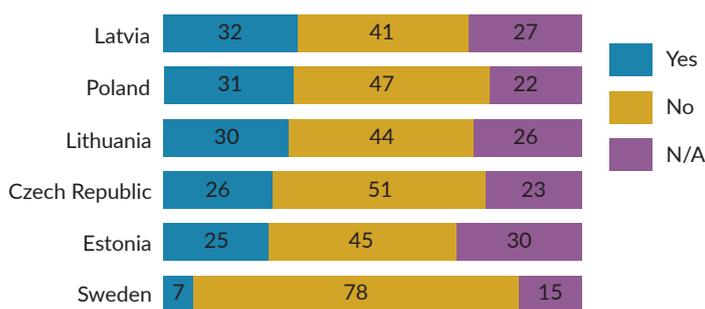
while answering questions. In our survey, respondents were asked if they had friends or relatives who worked in the shadow labour market (without labour contracts, or receiving part of their wage as an “envelope wage”) during the previous 12 months.

The countries in which the highest share of respondents admitted to having friends or relatives in the shadow labour

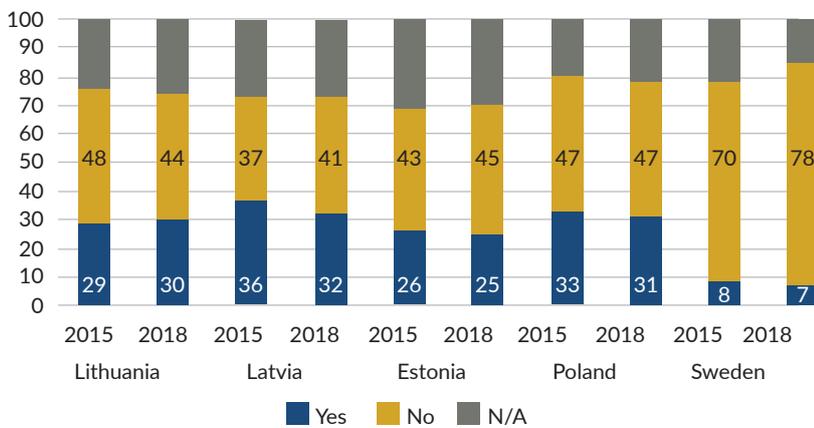
market were Latvia, Poland and Lithuania (32%, 31% and 30%, respectively). (Fig. 33)

In the Czech Republic and Estonia, the reported incidence of participation in the shadow labour market among friends or family was slightly lower, at 26% and 25%, respectively. The reported level of participation in Sweden was by far the lowest, standing at only 7%. Accordingly,

**Fig. 33: Percentage of respondents having friends or relatives in the shadow labour market (% , 2018)**



**Fig. 34: Having friends or relatives in the shadow labour market (% , 2015 and 2018)**



countries can be broken down into three groups by incidence of undeclared work.

Interestingly, the level of shadow employment has not changed markedly in comparison to the findings of the 2015 survey. Only Latvia recorded a significant change, with participation declining from 36% to 32%. All other differences were within the margins of statistical error. This suggests that the incidence of undeclared work has not changed

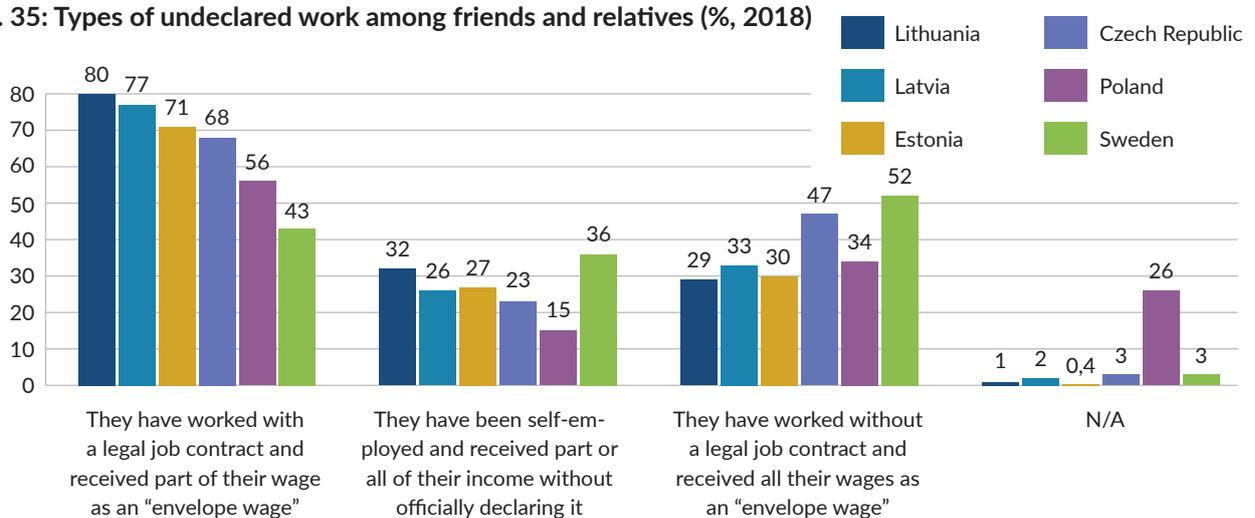
despite notable economic growth in all the countries in question. According to Eurostat (2018a), the average real GDP growth rate in 2015 through 2017 was 3% in the Baltic states and Sweden, and 4% in Poland. (Fig. 34)

In terms of the type<sup>11</sup> of undeclared work carried out by

<sup>11</sup> The survey results on the categories of undeclared work represent only that category of respondents who indicated that they had friends or relatives working in the shadow labour market. Respondents were given the option of providing multiple answers.

relatives or friends, most were reported to have worked with a job contract and received only part of their wage under the table (80%, 75%, 71% and 68% of respondents in Lithuania, Latvia, Estonia and the Czech Republic, respectively). Sweden was the exception. The highest proportion, indicated by 52% of respondents, was recorded for shadow employment without a legal job contract, in which the entire wage was paid as an envelope wage. Sweden also came top in the category of shadow self-employment in which all or part of the income is undeclared (36%). Notably, the Czech Republic ranks between the Baltic states and Sweden. It still has quite a high rate of shadow employment in which an official job contract goes together with an “envelope wage” (this tendency is most pronounced in the Baltic states). The Czech Republic has also a rather high incidence (47%) of undeclared employment without a job contract. The same goes for Sweden. Overall, the survey results show that the nature of undeclared work

**Fig. 35: Types of undeclared work among friends and relatives (% , 2018)**



Multiple-answer question; sum exceeds 100 per cent.

**Table 3: Undeclared work among friends and family by sector (% of respondents, 2018)**

	Lithuania	Latvia	Estonia	Czech Republic	Poland	Sweden
Construction and renovation	55%	47%	58%	32%	35%	47%
Catering and hotel services	17%	13%	26%	41%	15%	32%
Auto and other repairs	23%	23%	26%	12%	19%	25%
Farming, forestry or fishery	21%	23%	24%	11%	10%	17%
Production	18%	21%	14%	19%	18%	15%
Wholesale and retail trade	11%	19%	9%	14%	20%	15%
Housework, gardening and property care	11%	7%	11%	16%	17%	24%
Transportation and storage	16%	11%	7%	16%	12%	16%
Medical and beauty services	12%	18%	6%	7%	11%	8%
Childcare, sick and elderly care	10%	11%	6%	3%	14%	7%
Training and tutoring	9%	13%	2%	3%	15%	8%
Sewing, clothing and shoe repairs	10%	7%	4%	3%	9%	7%
Organisation of arts, entertainment and recreation activities	8%	5%	12%	3%	3%	5%
IT and telecommunications	8%	6%	4%	2%	3%	9%
Financial intermediation and consultancy	3%	5%	2%	5%	4%	5%

is diverse across the countries surveyed: in all countries, at least a quarter of respondents reported all types of shadow employment. (Fig. 35)

In the survey, we investigated the sectors where respondents had friends or relatives with shadow employment. Construction and renovation were found to be the most common, as indicated by the highest proportion of respondents in five countries (55% in Lithuania; 58% in Estonia; 47% in both Latvia and Sweden; 35% in Poland). The Czech Republic is the exception, with catering and hotel services being the most common sector of undeclared work among friends and relatives (reported by 41% of respondents) and construction and renovation following at 32%. Other common sectors were auto and other repairs, farming, forestry and fishery, production, wholesale and

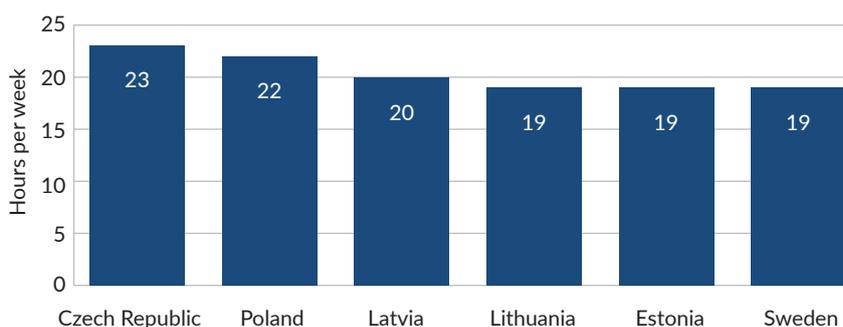
retail trade. In Sweden, respondents frequently reported undeclared work among friends and relatives in housework, gardening and property care.

Some significant changes (>10 p.p.) have occurred in the reported incidence of shadow employment since 2015. In Poland, the incidence of undeclared work in construction and renovation sector has decreased by 16 p.p. (from 51% to 35%). In

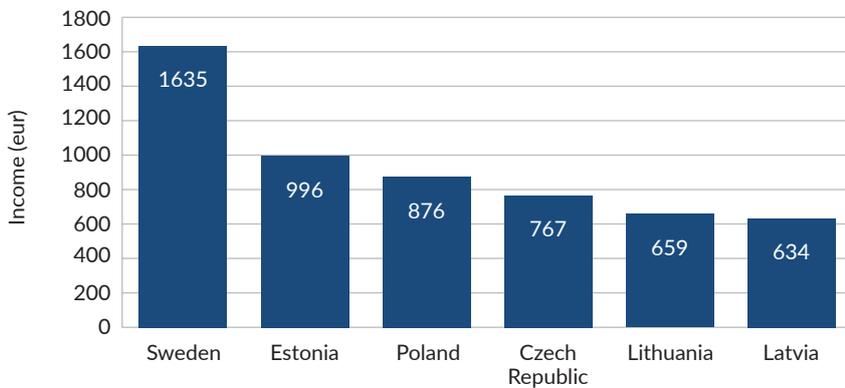
Lithuania, there was a similar decline for wholesale and retail trade, from 26% to 11%. In Estonia, a 12 p.p. decline was recorded in the transportation and storage sector, from 19% to 7%. The only significant increase was in Sweden, where the incidence of undeclared work in farming, forestry and fishery grew by 11 p.p., from 6% to 17%. (Table 3 and Fig. 36 and 37)

Survey participants who reported having friends or relatives in the shadow

**Fig. 36: Weighted average of hours spent on undeclared work by friends or relatives per week (hours, 2018)**



**Fig. 37: Weighted average of income earned from undeclared work by friends or relatives per month (eur, 2018)**



labour market were asked how many hours the person whom they knew best (they may have known more than one person) had spent on undeclared work each week within the last 12 months. Respondents were allowed to choose from intervals<sup>12</sup> of hours. For analytical purposes it is more convenient to calculate the weighted average<sup>13</sup> of hours spent on shadow employment in each country.

12 Data in intervals of hours worked and money earned are presented in the appendix.

13 Weighted average of hours spent on undeclared work is calculated by multiplying the middle of each range by the percentage of respondents in that range. The final, open range (40 hours or more) is taken as 44 hours. "Don't know" answers are eliminated by distributing the share proportionally to other ranges.

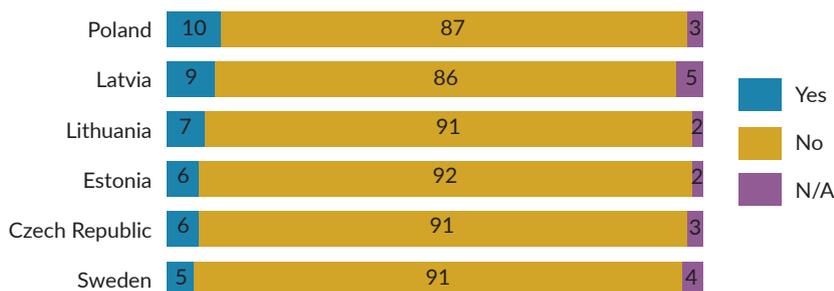
The weighted average of hours spent on undeclared work varies little among the countries under analysis. On average, friends and relatives were reported to spend 23 hours per week on undeclared work in the Czech Republic and 19 hours in Lithuania, Estonia and Sweden. Poland and Latvia fall in-between with 22 and 20 hours, respectively. Compared with the results of the 2015 survey, the number of hours remains unchanged in Latvia and Sweden, but has increased by 2 hours in Lithuania and decreased by 3 hours in Estonia and Poland.

Respondents were also asked how much the person they knew best had earned on average per month from

undeclared work during the last 12 months. Since the number of hours differs little among the countries, it is possible to compare the amounts of money earned. The weighted average of income earned from shadow employment reflects differences in average wages between the countries. In Sweden the average income reported for undeclared work was over 1,600 euro. Estonia came next with just short of 1,000 euro. The lowest average of undeclared labour income was in Lithuania and Latvia, at 659 euro and 634 euro, respectively. Since 2015, the average undeclared labour income has increased most in Sweden, Latvia and Lithuania (by 48%, 41% and 35%, respectively). In Estonia and Poland it has decreased slightly, by 3% and 5% respectively.

The data show that the general pattern of respondents' own experience<sup>14</sup> in the shadow labour market closely follows that of the reported incidence of undeclared work experience among friends and relatives. The countries with the highest proportions of respondents reporting personal experience in the shadow labour market within the last 12 months were Poland and Latvia, with 10% and 9% respectively. The rate was 7% in Lithuania, 6% in Estonia and the Czech Republic, and 5% in Sweden. (Fig. 38)

**Fig. 38: Respondents reporting personal experience with undeclared work (% , 2018)**



14 After answering about the experiences of their friends or relatives in the shadow labour market, respondents were asked about their own involvement. As previously mentioned, this two-step approach is designed to hedge the risk that people would answer questions not directly related to them more honestly. Asking respondents about their own experiences is more direct, but involves much greater risk of their responses not being truthful.

No significant changes in personal experiences with undeclared labour were observed between the results of the surveys from 2018 and 2015. As regards the type of shadow employment, the data on respondents' own experience

confirm similar tendencies to those among friends and relatives.<sup>15</sup> The most common type of shadow employment is working with a job contract

<sup>15</sup> Survey results on respondents' own experience and types of undeclared work are presented in the appendix.

and receiving part of the wage as an "envelope wage." Another common category is working without a legal job contract. Self-employment without declaring income is the least frequent type of undeclared work reported.

## DRIVERS OF THE SHADOW LABOUR MARKET

To unfold the drivers of the shadow labour market, we analysed public perceptions why people choose to informal employment arrangements.<sup>16</sup>

The majority of respondents in all countries except Sweden believe that the main reason why people work without a legal job contract, or work with a job contract with part of their wage paid under the table, is because labour taxes are high, and therefore shadow employment can offer higher wages. This reason was indicated by 69% of respondents in Estonia,

<sup>16</sup> Survey respondents were given the option of multiple answers, and were free to indicate one or two reasons.

64% in both Lithuania and Poland, 63% in the Czech Republic, and 59% in Latvia. In Sweden, the possibility of earning higher wages from undeclared work, without the burden of labour taxation, was also seen as the biggest single reason (42% of respondents), even though it was not indicated by the majority of respondents. (Fig. 39)

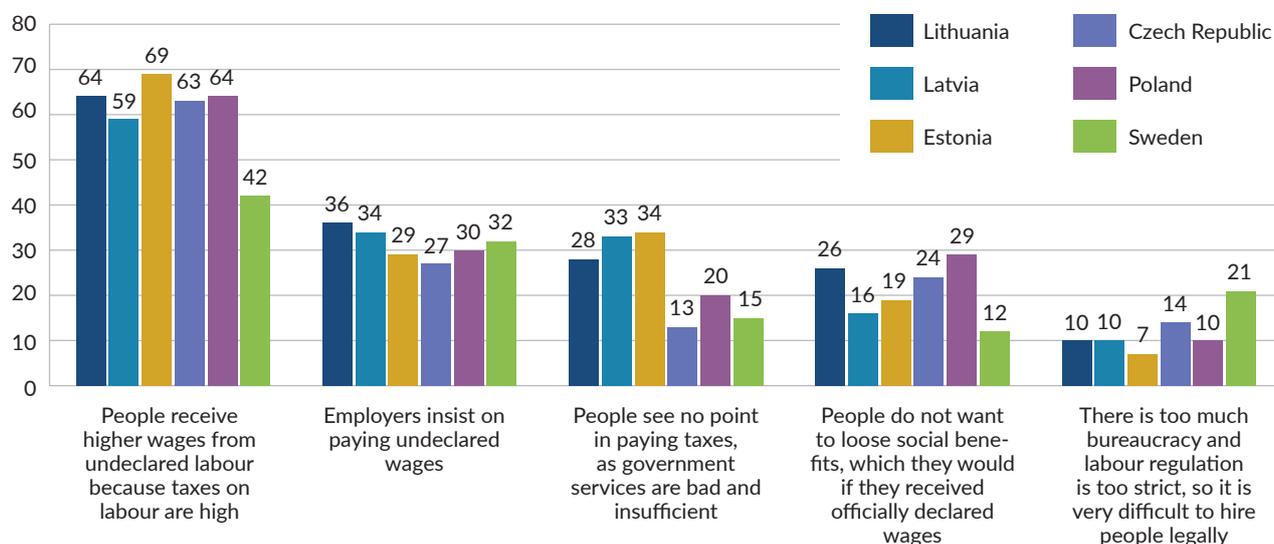
### Level of income and taxes

Almost all studies on the shadow economy suggest that the level of taxes and social security contributions

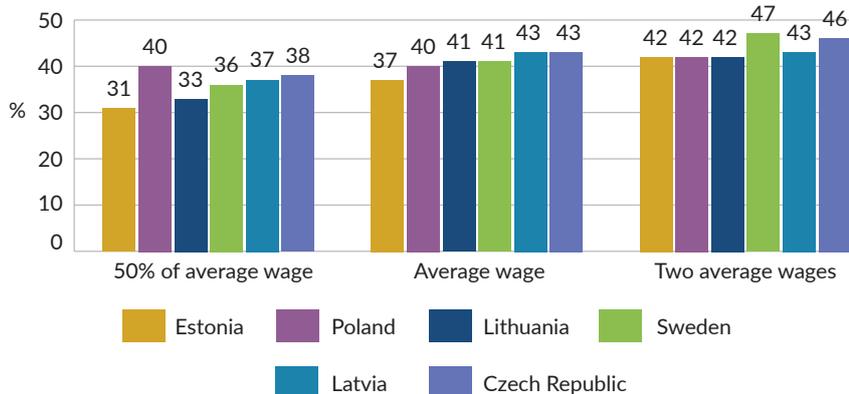
has a substantial impact on the size of the shadow economy (Schneider & Williams, 2013). The greater the difference between the total cost of labour in the official economy and after-tax earnings from work, the greater the incentive to reduce the tax wedge by working in the shadow economy.

Tax rates vary across the countries surveyed. Labour taxation has progressive nature, due to non-taxable income and also progressive tax rates in some cases. The lowest total tax rate paid on an average wage (including all employer and employee taxes) is in Estonia, at 37%. In Poland,

**Fig. 39: Reasons for undeclared work (% , 2018)**



**Fig. 40: Total taxation of labour (% , 2018)**



Lithuania and Sweden, the total rate is between 40 and 41%. Latvia and Czech Republic has the highest tax rate, at 43%. The Czech Republic has the highest tax rate, at 43%. As we can see, labour taxation is quite substantial and may create incentives for undeclared work. (Fig. 40)

Tax progressivity is quite different. A person who earns half of the average wage in Estonia pays 31% in taxes, but as much as 40% in Poland. One might suggest that high taxation of people on lower incomes is especially relevant to the shadow labour market. Low-income earners are more likely to enter into informal

labour arrangements, as potential increases in income are relatively more significant, and account for a higher share of their total budget.

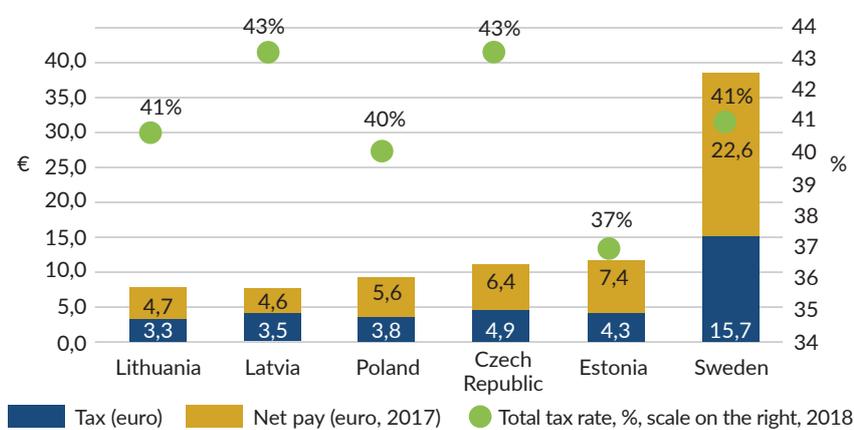
In the context of European economies, Sweden demands high social security contributions (42% of salary) and charges high marginal rates of tax on both low- and (especially) high-income earners (see Fritz Englund and Lundberg (2017)). This creates a significant wedge, and makes shadow labour relatively more profitable, so one would expect a high propensity to work in the shadow economy and to buy services illicitly. In discussing the drivers of the shadow

economy, Norrman (2009) lists them as the possibility to participate, economic gains (from lower prices or taxes), risk of detection, punishment if detected, and moral views. It is concluded that the most important factor in the Swedish context is economic gains, since marginal taxes are so high.

As we have seen in the case of consumption taxation, the total rate of tax on labour does not tell the whole story when it comes to incentives for undeclared work. A country's productivity, average wage and income level must also be considered. The graph below shows the average hourly wage (in 2017) divided into net (take-home) pay, and the portion paid in tax (according to 2018 rates). In some countries, net income after tax is still significantly higher, despite a higher relative rate of labour taxation. (Fig. 41)

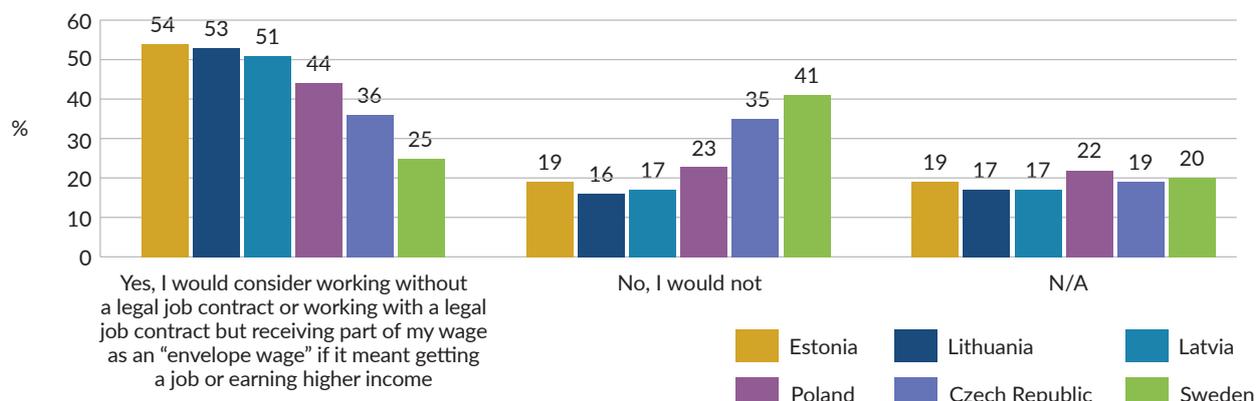
Even where the tax rate itself is similar across countries, taxes will be more burdensome when the net wage after tax is lower. In Sweden, average wage earners pay more in tax on their labour (in percentage terms as well in nominal terms) than in Latvia or Estonia, but their income after tax is much higher than in the Baltic countries. The average wage is around 16 euro per hour after tax in Sweden, and 5 to 7 euros per hour in Latvia and Estonia. This means that labour taxation in lower-income countries cannot be considered a lower burden, even if the tax rates are somewhat lower. This is because taxation in these countries reduces people's ability to better satisfy their more urgent

**Fig. 41: Average hourly income and labour taxation**



Source: Eurostat (2018b)

**Fig. 42: Would you consider participating in the shadow labour market in case of financial difficulties? (% , 2018)**



needs in comparison to countries where the level of income is significantly higher. When assessing the impact of taxation on the shadow economy, it is necessary to also embrace such factors as the level of income.

As was the case with the goods market, the level of income is also important when discussing the shadow labour market in the context of financial hardships. As many as 54% of respondents in Estonia, 53% in Lithuania and 51% in Latvia claimed that, if their income dramatically decreased and their financial situation severely worsened (e.g. they lost their job and could not find another one, or their income fell because of an economic crisis), they would consider working without a job contract or receiving part of their wage as an "envelope wage" if it meant getting a job or earning a higher income. (Fig. 42)

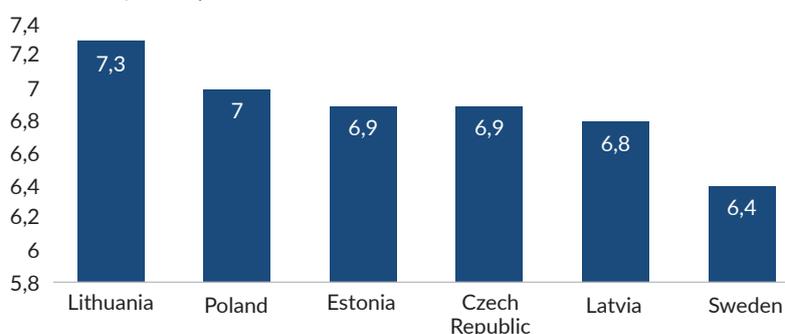
These findings confirm that the level of a person's income is a very important determinant when it comes to making a decision about undeclared work. In countries with lower relative

levels of income (the Baltic states), the risk of shadow employment in the case of economic hardships is significantly higher than, for example, in Sweden or the Czech Republic.

Survey participants were quite critical of the level of taxes compared to the quantity and quality of public services. In all the countries under analysis, most people consider the taxes they pay as high. Respondents gave their opinion on the level of tax on a scale from 1 to 10, where 1 means "taxes are very low", and 10 means "taxes are very high." A total 58% of respondents in Lithuania and 55% in Poland indicated the scores of 8, 9 or 10. The

corresponding share was 51% in Latvia, 48% in the Czech Republic, and 47% in Estonia. In Sweden it was the lowest, at 40%. No significant changes (i.e. >10 p.p.) were recorded in comparison to the results of the 2015 survey. This finding correlates with respondents' opinions in the Baltic states, Poland and the Czech Republic concerning the primary cause of the shadow labour market. It also explains why taxes were mentioned less often, in relative terms, as the primary reason for undeclared work in Sweden. Survey respondents in Sweden were least critical of the level of taxes they paid compared to the quantity and quality of public services they received. (Fig. 43)

**Fig. 43: What is your opinion about the level of taxes you must pay compared to the amount and quality of public services that you receive? (mean score, 2018)**



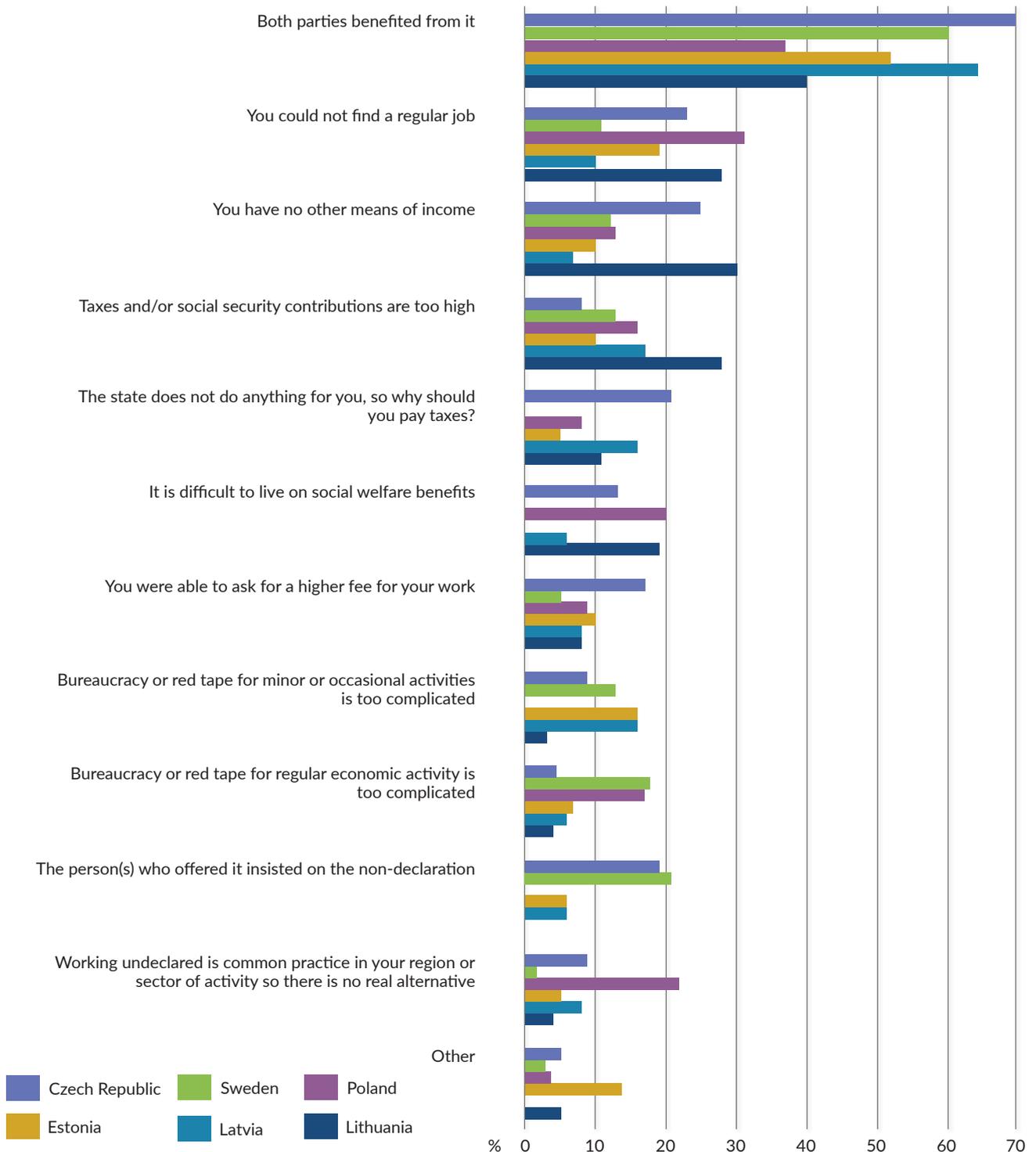
On a scale from 1 to 10, where 1 means "taxes are very low" and 10 means "taxes are very high"

In 2014, the European Commission (2014) conducted a special Eurobarometer survey on undeclared work which embraced analysis of its reasons in all EU countries.

The most common reason for undeclared work reported by people with undeclared work experience was that both parties – the employer and the employee – benefited

from it. Among four top-ranked reasons was that taxes and social contributions were too high. This may be seen as contrasting with our survey, taxes being only

**Fig. 44: Among the following, what were the reasons for doing these activities undeclared? (%)**



Source: European Commission (2014)

a third reason by importance. But we should keep in mind that both parties can benefit from a shadow employment arrangement only in cases where taxation (and to some extent regulation) is so high that tax evasion becomes beneficial to both parties. For this reason, the most common reason reported in the Eurobarometer survey should also be considered as relating to high taxation. (Fig. 44)

A European Commission (2017) factsheet<sup>17</sup> on undeclared work also provides evidence that is in line with our study, namely that the main reason for undeclared work in all countries investigated is a high tax burden as it creates incentives to opt for higher incomes from informal work

<sup>17</sup> European Commission factsheet can be found on <http://ec.europa.eu/social/main.jsp?catId=1322&langId=en>

arrangements. Other reasons include a high administrative burden, unemployment, social benefits, the avoidance of financial obligations, and a relatively low national income level (for more see the box “From the European Commission factsheet on undeclared work”).

## From the European Commission factsheet on undeclared work

### LITHUANIA

One of the main motivators for undeclared work in Lithuania is the high tax burden and low wages (Patapas & Gudonis, 2014; Pocius, 2015): in the conditions of the overall low level of income and high tax wedge, people are more inclined to increase their income through undeclared work. Other identified

motivators include a high administrative burden (in the case of labour relations), a desire to continue receiving support from the state (e.g. unemployment or social benefits) after entering employment, and the avoidance of financial obligations (e.g. payment of child support, debts, etc.).

### LATVIA

A key motivator for undeclared work in Latvia is low tax morale. However, Putniņš and Sauka (2015b) find that the statistically significant factors are:

- Balance of costs and benefit associated with tax evasion;
- Discontent is associated with greater activity in the shadow economy;
- Discontent with business legislation (strongest effect), the work of the State Revenue Service, tax

policy, government support for business (weakest effect);

- A higher degree of justification of shadow economic activity is associated with more participation in the shadow economy;
- Smaller firms tend to be more involved than larger ones in the shadow economy; and
- Russian speakers are more inclined to be involved in shadow activity.

### ESTONIA

In Estonia, three theoretical financial incentives exist for undeclared work. First, overall the income level is low when compared to neighbouring Scandinavian countries; non-payment of taxes is seen as an easy way to increase personal or business income. Second, considerable differences exist between the taxation of labour (personal income tax is 20%; social tax is 33% of gross earnings; unemployment insurance premium is 1.6% of gross earnings) and corporate

income (only the distribution of profits is subject to income tax at the rate of 20% of the taxable amount). Third, individuals are sometimes motivated to hide their real income in order to take up benefits and tax credits for people in employment, or might be interested in undeclared income in case they are obliged to pay for child support and intend to avoid such obligations.

## SWEDEN

The main motivators for undeclared work in Sweden varied by type of workers. A survey by the Swedish National Audit Office (1998), self-employed and blue-collar workers performed most of the undeclared work. Students have a strong incentive to hide their extra earnings as their publicly subsidised study-loans are conditional on a low income from work. As expected, self-employed and blue-collar workers carry out a significantly higher share of undeclared work than white-collar workers, as incomes from informal employment are mainly found in construction and other services. One common type of undeclared work is where self-

employed individuals obtain undeclared compensation for work performed in households, to avoid the tax wedges created by the households' payroll taxation. Increased labour migration also creates a substantial risk of undeclared work, in particular in the construction sector. The Swedish National Council for Crime Prevention (Bråttförebyggande rådet - Brå) states that undeclared work is common among subcontractors in the construction sector, where employers avoid paying social security contributions and payroll taxes, and false invoices hide payments in cash.

## CZECH REPUBLIC

One of the two main incentives for undeclared work is the high tax wedge on low-wage earners through social security contributions. Equally importantly, the Czech tax wedge gap between self-employed people and employees continues to be one of the largest in the EU. Correspondingly, an unusually high proportion of workers in the Czech Republic are self-employed, i.e., work in job types more prone

to illicit arrangements. The administrative burden imposed on employers by the three systems of tax collection (income tax, social security, and health insurance) could represent another contributing factor (Doing Business, The World Bank (2014) reports high workload in terms of hours related to this agenda in an average Czech firm).

## POLAND

Analysis of the CSO survey results (Central Statistical Office, 2015) in Poland indicates that the main reasons for undeclared work are: inability to find a formal job (58.8%) and a difficult material situation (insufficient income) (39.6%). Other reasons include: the employer proposing higher pay for work without a formal job contract (24.6%); a high insurance rate (20.5 %); and taxes that discourage from declaration of income (13.2%). According to Human Capital Balance research

carried out between 2010 and 2014,<sup>18</sup> the main causes for not concluding a formal employment agreement are as follows: unwillingness of the other side to conclude an employment agreement (40%); treating undeclared work as additional or temporary work (30%); working mainly for family or friends (19%), and taxes and fees that are too high (18%).

<sup>18</sup> Bilans Kapitału Ludzkiego [Human Capital Balance], Internet: [www.bkl.parp.gov.pl](http://www.bkl.parp.gov.pl)

The importance of taxation is also demonstrated by other studies and surveys from the countries under analysis. According to a survey by Swedbank (Žurnalas IQ, 2017) 61% of people in Lithuania would declare their income if the income tax rate was lowered from the current 15% to 5%. High taxes incentivize justification of and

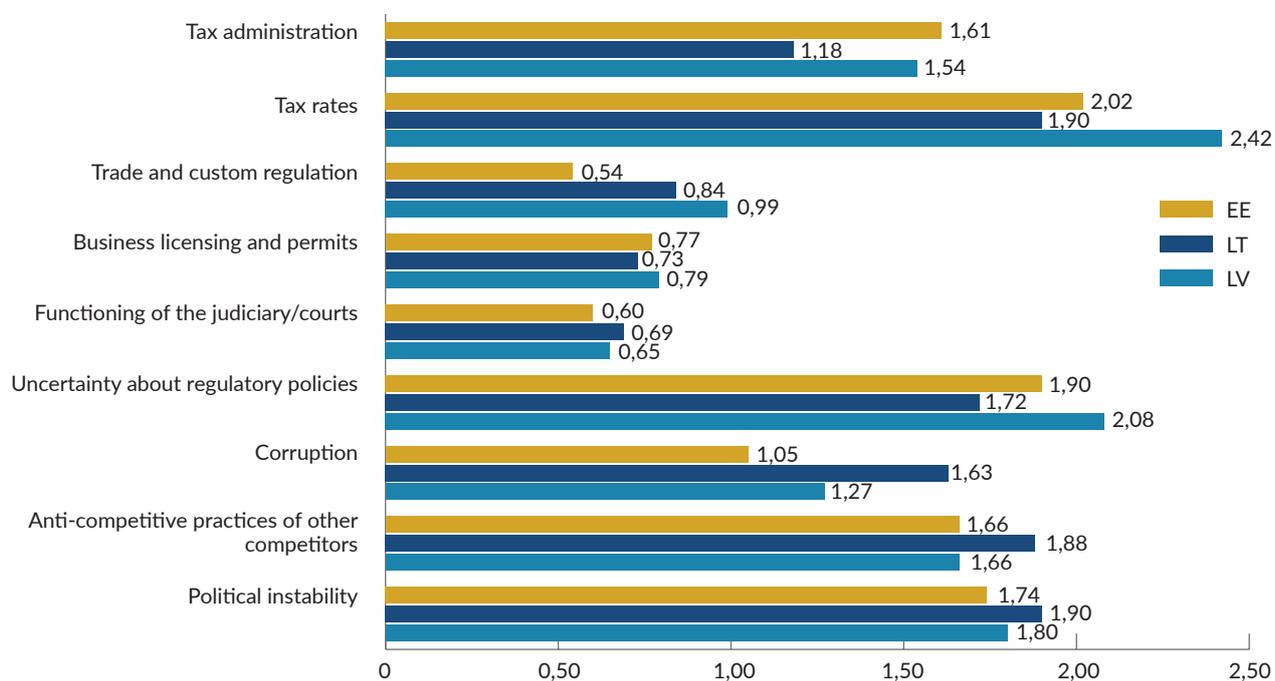
engagement in illicit activities, purely for economic reasons. The State Tax Inspectorate also finds that 68% of the population and 81% of business representatives think that lowering taxes would significantly increase incentives to pay them (Valstybinė mokesčių inspekcija, 2017). Entrepreneurs in Latvia also mention high tax

rates, along with regulatory uncertainty, as key concerns for competitiveness (Putniņš & Sauka, 2018). (Fig. 45)

Analysis of illicit activities among companies in the Baltic states<sup>19</sup> conducted by Meriküll, Rõõm, and Staehr (2012)

<sup>19</sup> SSE Riga 2010 survey data from interviewed company managers in the Baltic states are used.

**Fig. 45. External environment: quality of formal and informal institutions, 2017. Average ratings on a scale 0 to 4, where '0' means "it is not a problem for my business" and 4 means "it is a very big problem for my business".**



Source: Putniņš & Sauka (2018)

finds that salaries are the first thing to go undeclared in the case of economic hardships. The study concludes that reasons which are associated with individualistic, rational behaviour are the most relevant drivers of the shadow labour market. Reciprocity towards government and social norms are also relevant, but to a lesser degree.

## Regulation

More than one-fifth of respondents in Sweden and 14% in the Czech Republic believe that strict labour regulation is one of the primary causes of undeclared work. One in ten respondents in Lithuania, Latvia, and Poland, and 7% of those in Estonia, share this opinion. Strict labour regulation and high bureaucracy and employment

costs make it difficult and expensive to hire people legally. This suggests that the costs of legality in the labour market pertain not only to the taxes employees and employers pay, but also to other regulations they have to fulfill.

The impact of labour regulation is discussed in studies focusing on costs and effects of labour regulation. According to the Employment Flexibility Index 2018,<sup>20</sup> excessive labour regulation is associated with labour market segmentation and reduced employment opportunities or higher unemployment (World Bank,

<sup>20</sup> The Lithuanian Free Market Institute (2017) published the Employment Flexibility Index 2018 for the countries of the European Union and the Organisation for Economic Co-operation and Development. The index is based on the World Bank's Doing Business data on labour market regulation, and covers a set of indicators on hiring, minimum wage, working hours, redundancy rules, and redundancy costs.

2004), particularly among young workers and women. Employment protections also impact the cost of market entry and exit, and the costs associated with workforce adjustments, thus affecting corporate decisions (Scarpetta, 2011) to enter or leave markets, and contributing to the dualism<sup>21</sup> of the labour market (Lithuanian Free Market Institute, 2017). One way to view the duality of the market created by this excessive regulation is the emergence of the shadow labour market. The high costs associated with

<sup>21</sup> A dual labour market divides workers into 'insiders' and 'outsiders', where insiders are typically prime-age male employees, often in open-ended employment, while outsiders – youth, women, the unemployed – enter the labour market through a series of short-term contracts, with a slow transition towards open-ended employment. This duality reflects a situation in which the workforce is divided between permanently employed insiders, and outsiders who are informally employed, as well as the unemployed. (Kuddo, Robalino, & Weber, 2015)

strict labour market regulation divide the labour market into a legal market, which is capable of bearing the burden, and an undeclared market, in which people and companies choose to avoid costs either because they are too heavy, or because they want to split the benefits of the reduced cost of operations. (Fig. 46)

According to the Employment Flexibility Index 2018, the Czech Republic has the most flexible labour regulation. Regulation is less flexible in Latvia, while Lithuania, Estonia, Sweden and Poland are found to impose more rigidity on employment relationships.

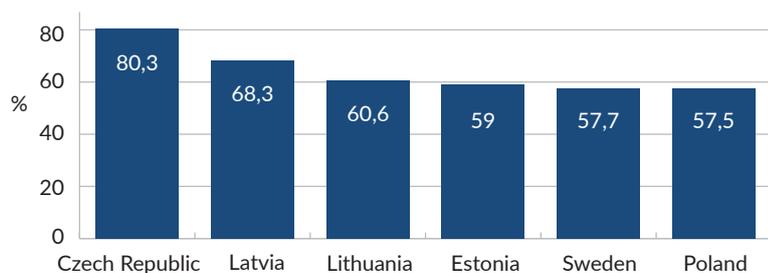
The level of mandatory minimum wage is an important part of labour regulation. A high minimum wage creates incentives for undeclared work. Many studies, e.g. IMF (2015), suggest that high minimum

wages are a problem for the labour market. The National Institute of Economic Research (2015, 2017) notes that *de facto* minimum wages in Sweden are very high, and lead to higher unemployment in certain groups. High minimum wages (both in real terms and as a share of the average wage) are found to create a large barrier for less skilled workers in Sweden to enter the labour market, possibly forcing them into shadow employment (Spector, 2014). Sweden applies no mandatory minimum wage, but as a result of strong trade unions the minimum wage set in collective agreements is the *de facto* minimum wage in a given sector. Sweden is an extreme case in terms of the ratio of the minimum wage to the average wage. For example, in hotel and catering services, the minimum wage is 88,1% of the average wage; in the retail trade the ratio stands at 85%.

Mandatory minimum wages in other countries are also fairly high. OECD data show that the ratio of minimum wage to average wage for full-time employees is as high as 44% in Poland and 43% in Lithuania, which is above the OECD average. In other countries this ratio is somewhat lower. (Fig. 47)

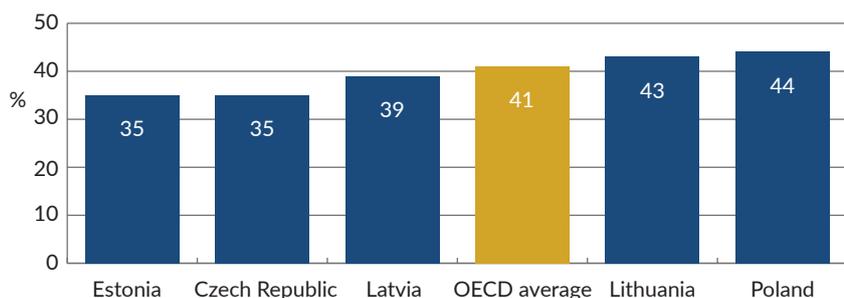
Mandatory minimum wages may have varying effects across sectors or regions of a country, depending on differences in economic conditions. In certain Lithuanian municipalities, the ratio of minimum-to-average wage is much higher than the average for the whole country. In the Zarasai district, for instance, the minimum wage constitutes 64% of the average wage in the region. The minimum wage sets a floor for employers' total labour costs for minimum wage earners. Certain employers may be unable to pay the high price, and may use informal arrangements with "envelope wages."

**Fig. 46: Employment Flexibility Index (scores, 2018)**



Source: Lithuanian Free Market Institute (2017)

**Fig. 47: The ratio of minimum wage to average wage for full-time workers (%), 2017**



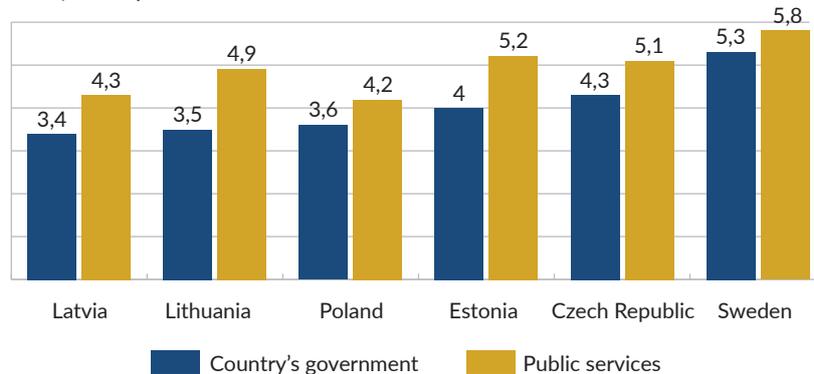
Source: OECD (2018)

## Satisfaction with the government and public services

According to roughly one-third of respondents in Lithuania, Latvia and Estonia (28%, 33% and 34%, respectively), one reason for the shadow economy is that people see no point in paying taxes because they regard government services (education, healthcare, social security, etc.) as inadequate or insufficient. In Estonia the proportion of respondents expressing this view has grown quite considerably (by 11 p.p.) since 2015. Once people start

to think they are not getting enough in return for the taxes they pay, their incentives to earn money in the shadow economy increase. Low-quality government services are mentioned less frequently as a reason for undeclared work in Poland, the Czech Republic and Sweden (20%, 13% and 15%, respectively). In Sweden, the proportion of people with such attitudes has actually declined by 10 p.p. since 2015. (Fig. 48)

**Fig. 48: Satisfaction with the government and public services (mean score, 2018)**



On a scale where 1 means "completely dissatisfied" and 10 means "completely satisfied"

It is not accidentally that Sweden and the Czech Republic report the highest degree of satisfaction with government and public services. In Latvia and Lithuania, this satisfaction was on average lower, which explains why it was mentioned as one of the reasons for the shadow economy.

Satisfaction with government and public services are also factors that may influence the level of justification for illicit economic activity. A relatively low appraisal of government and public services suggests that people may use it as an excuse for undeclared labour and illicit trade. This connection is also apparent in other studies. Research conducted by the Lithuanian State Tax Inspectorate (2017) suggests that four in ten people believe that lower corruption and greater transparency would incentivise people to declare their income and pay taxes. Another study by the State Tax Inspectorate finds that a total of 74% of business representatives who justify tax avoidance, consider unjust tax policy to be the reason for this (Valstybinė mokesčių

inspekcija, 2017). Another 28% of business representatives justify tax avoidance because of the inefficient or unjust redistribution of tax revenues.

Putniņš and Sauka (2018) argue that firms that are dissatisfied with the tax system or the government tend to conduct illicit economic activity on a wider scale. This finding is consistent with research on tax evasion, and has explicit implications for policy-making to reduce the shadow economy in Latvia and other countries. Meriküll *et al.* (2012) suggest that there is a significant link between the quality of government services and the perceived incidence of unreported activities among Estonian company managers. Their research shows that firms are more likely to evade taxes when the public sector is less efficient and the government is not supportive of entrepreneurial activity.

### Social security

Respondents in Poland, Lithuania and, to some extent, the Czech Republic were more

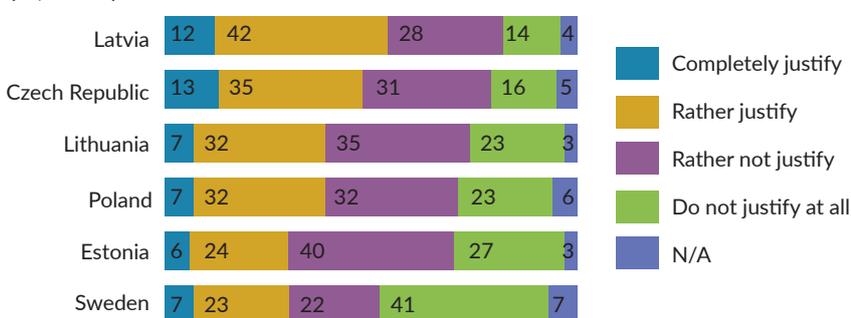
likely than others surveyed to believe that failure to declare work was related to the state social security system: people work illegally because they do not want to lose their social benefits, which they would if they received official wages. This opinion was reported by 29% of respondents in Poland, 26% in Lithuania and 24% in the Czech Republic. It should be noted that the share of respondents expressing this opinion has fallen by a striking 35 p.p. in Latvia and 14 p.p. in Sweden since 2015.

When social allowances are overly generous and the main criterion to qualify for them is legal income, people are incentivised to hide their earnings and seek shadow employment. Research by the Lithuanian State Labour Inspectorate suggests that the fear of losing social benefits may provide a significant motivation for people to take up undeclared work (Valstybinė darbo inspekcija, 2016). In the Czech Republic, jobless people can receive almost as much from social benefits as they would earning minimum wage (at least for the first five months of unemployment).

**Fig. 49: Justification of working without a legal job contract (% , 2018)**



**Fig. 50: Justification of working under a legal job with an envelope wage (% , 2018)**



Low-skilled workers who are likely to earn minimum wage are motivated to remain as officially registered unemployed and work in the shadow economy. In Poland, an issue exists with access to healthcare. According to official estimates, 40% of the registered unemployed are uninterested in finding a legal job; they work in the shadow economy, and register to receive free health insurance (Szymański, 2018).

## Justification

Justification of the shadow economy is closely related with tax morale. Williams and Horodnic (2015) find from a population survey in Lithuania, Latvia and Estonia that tax morale has a strong inverse correlation with the probability of engaging in illicit activities.

The level of tax morale – the moral obligation to pay taxes and “a belief in contributing to society by paying taxes” (Torgler and Schneider 2009, p. 230) – has been linked by numerous studies to the overall level of involvement in various types of shadow activities (see Mickiewicz, Rebmann and Sauka, 2017).

The level of tax morale also explains different degrees of justification of the shadow economy, which is a very important factor influencing participation in illicit activities. The level of justification can be interpreted in several ways. First, it shows to what extent the conditions are conducive for the shadow economy. The more society justifies a certain activity, the easier it is for people to participate in it. A high level of justification can also be seen as demonstrating

the degree to which people actually engage in the shadow economy. The more people participate in the shadow economy, the higher the degree of justification of illicit activities, due to people’s personal experience.

On average, working without a legal job contract is justified to a lesser degree than working under a legal job contract with an envelope wage. This tendency is robust, judging from similar findings in the 2015 survey. Justification for undeclared work falls into three groups across the countries analysed. Latvia and the Czech Republic reported the highest degree of justification of working without a legal job contract and working under a legal employment agreement but with envelope wage. In Latvia, 38% of respondents completely justify or tend to justify working without a legal job contract, and 54% justify work with a legal job contract when part of the wage is an envelope wage. In the Czech Republic, these proportions are 36% and 48%, respectively. (Fig. 49)

Undeclared work is justified to a slightly lesser degree in Poland and Lithuania. In Poland, one-third of respondents justified work without a job contract, while four in ten justify the combination of official job contracts with envelope wages. In Lithuania these proportions were 25% and 39%, respectively. Respondents in Sweden and Estonia belonged to a third group. In Sweden, one in four justified work without a legal job contract, and 30% said they justified undeclared work under a legal job contract with an envelope wage. In Estonia,

the corresponding numbers were 22% and 30%. In Estonia and Sweden, a lower incidence of undeclared work goes hand-in-hand with a lower incidence of people who have friends and relatives working in the shadow labour market. (Fig. 50)

The general tendency is that justification for undeclared work with or without a job contract has either decreased slightly or remained the same across the analysed countries since 2015. The share of respondents who justified working without a legal job contract has decreased by 5 p.p. in Poland and Sweden. The degree of justification for shadow employment with an official job contract has dropped by 4 p.p. in Lithuania, Latvia and Estonia.

Putniņš and Sauka (2017) measured the level of tolerance towards tax avoidance in the three Baltic countries between 2010 and 2016. They find that Latvian managers tolerate tax evasion less than Estonian managers, while justification of tax evasion is found to be lower in Lithuania.

## Likelihood of detection and punishment

The perceived likelihood of detection, and of being punished when caught, are two components of the perceived cost of working in the shadow economy. The higher the perceived likelihood and the greater the perceived punishment, the lower the likelihood of working in the informal labour market. Survey participants were asked about their perceptions of the likelihood of being detected

while working without a legal job contract and while receiving at least part of their wage under the table, as well as their perceptions about the severity of punishment in such circumstances. (Fig. 51)

The highest likelihood of being detected while working in the shadow labour market was perceived in Sweden, Estonia and Lithuania. In Sweden, 46% of respondents believed that the likelihood of being caught was very high or quite high. This corresponds with Sweden having the lowest incidence of friends or relatives with undeclared work experience. In Latvia and the Czech Republic, the share of those who think that the likelihood is very high or quite high is somewhat lower, standing at 42%. Poland reported the lowest proportion,

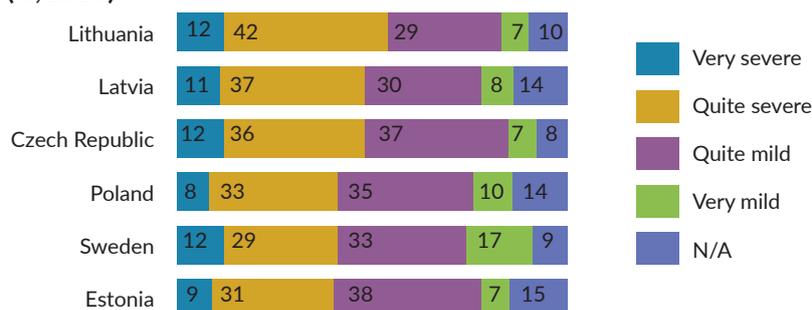
at 37%. It is important to note that Sweden reported a striking reduction of 17 p.p. in this segment of respondents, while in the other countries the decrease was insignificant (5 p.p. in Poland; 4 p.p. in Estonia; 3 p.p. in Latvia; and 1 p.p. in Lithuania). (Fig. 52)

These data suggest that punishment is a less important factor determining participation in the shadow labour market. This is because the perception of punishment is less related to the incidence of participation than the likelihood of being detected. The share of respondents who believe that the punishment for undeclared work is very severe or quite severe is the highest in Lithuania (54%) and Latvia (48%). However, Lithuania and Latvia report the highest incidence of

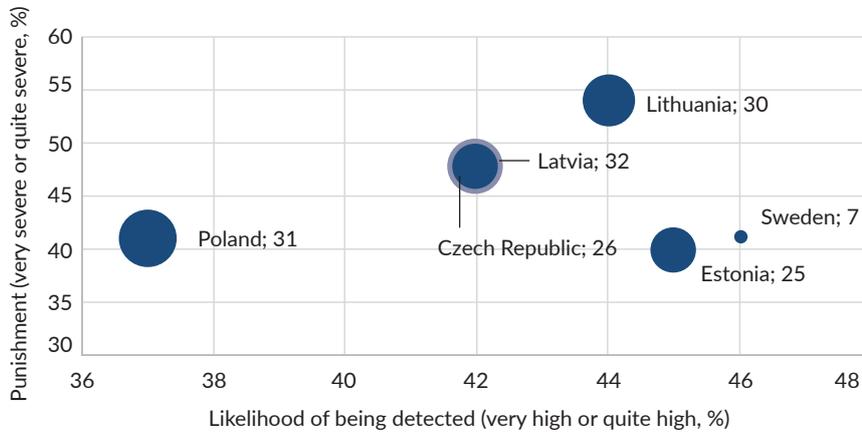
**Fig. 51: Likelihood of being caught working without a legal job contract or while receiving at least part of the wage as an envelope wage (% , 2018)**



**Fig. 52: Perception of the severity of punishment if caught working without a legal job contract or receiving at least part of the wage as an envelope wage (% , 2018)**



**Fig. 53: Punishment, likelihood of being detected, and reported incidence of friends/relatives working without a legal job contract or receiving at least part of the wage as an envelope wage**



Bubble size represents percentage of respondents who reported having friends/relatives who engaged in the shadow labour market.

undeclared work. On average, perceptions of the severity of punishment are the lowest in Sweden and Estonia. (Fig. 53)

Half of all survey respondents in Sweden and 45% in Estonia think that punishment for undeclared work is quite mild or very mild. At the same time, they report by far the lowest incidence of undeclared work. Compared to 2015, we can see again that the perceptions of punishment have changed quite significantly in Sweden: the share of respondents who think that the punishment is high has increased from 26% to 41%.

---

## CONCLUSIONS

### Shadow goods market

- The surveys show that experiences with unaccounted purchases differ widely in the Baltic states, the Czech Republic, Poland and Sweden, but participation in the shadow goods market is prevalent in all of them. The highest incidence of people who reported purchasing from illicit sources (or those who do not declare their income) occurred in the Baltic states, where a large percentage of respondents indicated they had made such a purchase. In other countries, the share was lower, but still quite significant. These results demonstrate that illicit purchases are fairly widespread, and their level has remained robust over time: the situation has changed little since 2015.
- The most popular categories of goods bought via illegitimate purchases are either very common goods that constitute a large proportion of consumers' spending (e.g. food products, clothes, auto repairs etc.), or goods that are highly taxed (e.g. cigarettes, alcoholic beverages, fuel).
- Individual spending on unaccounted purchases varies across countries according to income. It is by far the highest in Sweden, followed by Poland, then the Baltics states and the Czech Republic. We can see a sizeable increase in expenditure on illicit purchases compared to the previous survey in 2015.
- In all countries, the high cost of legitimate goods and services is the main reason given for engaging in the shadow goods market. The affordability of goods, and price differences between legitimate and illegitimate goods, are found to be the main determinants when it comes to unregistered purchases.
- The effect of taxation upon the shadow goods market depends on the level of income and the affordability of goods. Higher taxes in high-income countries (e.g. Sweden) may do little to incentivize the shadow economy, because people with higher incomes can afford higher taxes and higher prices. Conversely, in low-income countries (e.g. Latvia or Lithuania), even low levels of tax may encourage a great deal of activity in the shadow economy, because people are more sensitive to prices due to their lower income. This finding demonstrates that the tax burden (especially when considering the causes of shadow economy) is not always accurately reflected by the tax rate alone.
- One important consideration is how quickly people fall back into the shadow economy in circumstances of economic hardship, loss of jobs, lower income and the reduced affordability of goods. As many as half of respondents in Lithuania reported that they would consider buying cheaper goods from illegal providers, or from legal providers who do not declare their income, if their financial situation worsened. This indicates that periods of economic growth and prosperity do not reveal the whole picture. The impact of economic policies on the shadow economy must also be considered in the context of periods of economic decline, to determine how quickly people relapse into the shadow economy.
- Undeclared goods or services are sometimes perceived as better or faster to obtain, rather than being an inferior or "budget" option. If regulation of the legal market restricts the sale of products legally, it creates inconvenience for customers (e.g. restrictions on retail opening hours, limited product information, lower quality caused by restrictions on product choice, etc.).
- Justification of the shadow economy is a very important factor influencing people's participation in the shadow economy. The more justified these activities are regarded to be within society, the more likely individuals are to pursue them. Justification, as well as participation, is highest in Latvia and Lithuania, and lowest in Sweden and Poland. Smuggling, the illegal production or sale of cigarettes, alcohol products and fuel are seen as "more illegal," and are justified to a lesser extent in all six countries compared to other, "less illegal," illicit activities.
- The extent to which people feel sympathetic towards their government, and how satisfied they are with the government's services, may influence their decision to participate in the shadow economy. The feeling of belonging to the country's community also has an influence.
- Perceptions of punishment and the likelihood of being detected follow a similar pattern across all countries. Punishment

---

and the likelihood of being detected for smuggling or the illegal production and consumption of cigarettes, alcohol products and fuel are perceived to be high by a greater share of people than punishment in general for purchases from illegitimate sources.

- Both the likelihood of being detected and the severity of punishment are important factors in deterrence. In the Baltic states, where the incidence of purchasing goods from an illegal source is relatively high, perceptions of the severity of punishment and the likelihood of being detected are lower than in the Czech Republic, Poland or Sweden.
- The above-mentioned pattern is not seen for the illegal production and consumption of cigarettes, alcohol products and fuel. In some countries, people engage in these illicit activities even though they perceive the likelihood of being detected as high and punishment as severe; in others, they engage in these activities less even though detection is regarded as unlikely and punishment perceived as less severe. This shows that actions against the shadow economy that focus on detection and punishment may have a limited effect in some situations.

### **Shadow labour market**

- The incidence of undeclared work remains unchanged since 2015 despite notable economic growth in all the countries analysed. The highest estimates for the prevalence of undeclared work are in Latvia, Poland and Lithuania. They are slightly lower in the Czech Republic and Estonia, and by far the lowest in Sweden.
- The shadow labour market is fairly diverse across the countries surveyed. In all of them except Poland, at least one-quarter of respondents reported they had friends or relatives with all types of undeclared work: working without a legal job contract; having a legal job contract but receiving part of their wage under the table; and being self-employed and not declaring part of income.
- While the average number of hours spent on undeclared work varies little between countries surveyed (ranging between 19 and 23 hours per week), the average income earned from informal employment arrangements

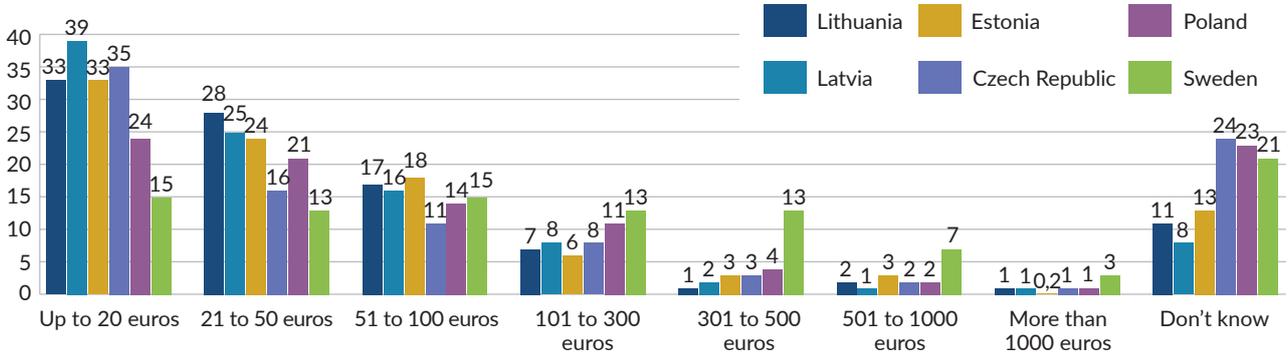
reflects differences in development across the countries. Since 2015, average income from undeclared work has increased the most in Sweden, Latvia and Lithuania.

- Respondents report that they work without a legal job contract, or work with a job contract but receive part of their wage as an envelope wage, because the taxes on declared labour are high. Undeclared labour allows people to earn higher wages by avoiding taxes. This is the most important driver for shadow employment across all countries analysed. Respondents are quite critical about the level of taxes. They tend to think that taxes they pay are high when compared to the quantity and quality of services they receive.
- As in the case with consumption taxation, the total tax rate on labour does not tell the whole story when it comes to the incentives to participate in the shadow labour market. One must also consider the level of income. Even if countries have a similar tax rate, taxes will be more burdensome for those with lower net wages. Sweden has a higher effective tax rate on labour than Latvia or Estonia, but income after taxes in Sweden is still significantly higher. In low-income countries, taxes diminish people's ability to satisfy their more urgent needs to a greater extent than in high income countries. When estimating the impact of taxation on the shadow economy, consideration must therefore be given to the level of income.
- People in low-income countries are more prone to relapsing into illicit activity if the economy worsens. As many as half of respondents in Estonia, Lithuania and Latvia reported that if their income decreased dramatically and their financial situation worsened severely, they would consider working illegally without a job contract, or receiving part of their wage under the table, if it meant that they could get a job or earn a higher income.
- Strict labour regulation, a high level of bureaucracy, and greater costs of hiring people make it difficult and expensive for employers to hire people. This suggests that the costs of legitimacy within the labour market pertain not only to the taxes that employees and employers have to pay, but also to other regulations with which they must comply.

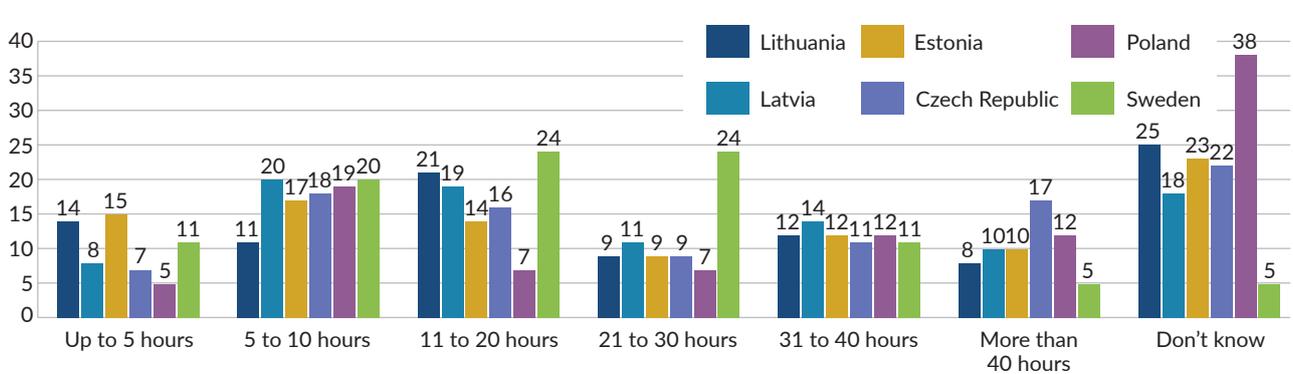
- 
- The level of mandatory minimum wage is an important part of labour regulation. High minimum wages (both in real terms and as a share of the average wage) are found to create a large barrier for lower-skilled workers to enter the labour market, possibly forcing them into shadow employment.
  - Public perceptions about government services and the level of satisfaction with government are factors that may influence the level of justification for illicit economic activity. A relatively low appraisal of the government and public services suggests that people may use it as an excuse to engage in undeclared labour and illicit trade. Approximately one-third of respondents in Lithuania, Latvia and Estonia believe that one reason for the shadow economy is that people see no point in paying taxes because government services (education, healthcare, social security, etc.) are inadequate or insufficient.
  - People in Poland, Lithuania and, to some extent, in the Czech Republic are more likely than others to believe that failure to declare work is caused by flawed incentives created by the state social security system. People work illegally because they do not want to lose social benefits, which they would if they received official wages.
  - On average, working without a legal job contract is justified less frequently than working with a legal job contract when part of the wage is paid unofficially. This corresponds to the notion of the degree of illegitimacy, and that people differentiate between illicit activities on the basis of how many legal and illegal actions are involved in an illicit activity.
  - Justification for both working without a legal job contract and working with a legal job contract when part of the wage is paid as an envelope wage was greatest in Latvia and the Czech Republic. Across countries, the general tendency is that justification has either decreased slightly or remained the same for undeclared work with or without a job contract since 2015.
  - The perceived likelihood of being detected and the severity of punishment if detected are two components of the perceived cost of working in the shadow economy. The higher the perceived likelihood and the more severe the perceived punishment, the higher the cost. The countries in which respondents perceived they were most likely to be detected while working in the shadow labour market were Sweden, Estonia and Lithuania.
-

# ANNEX

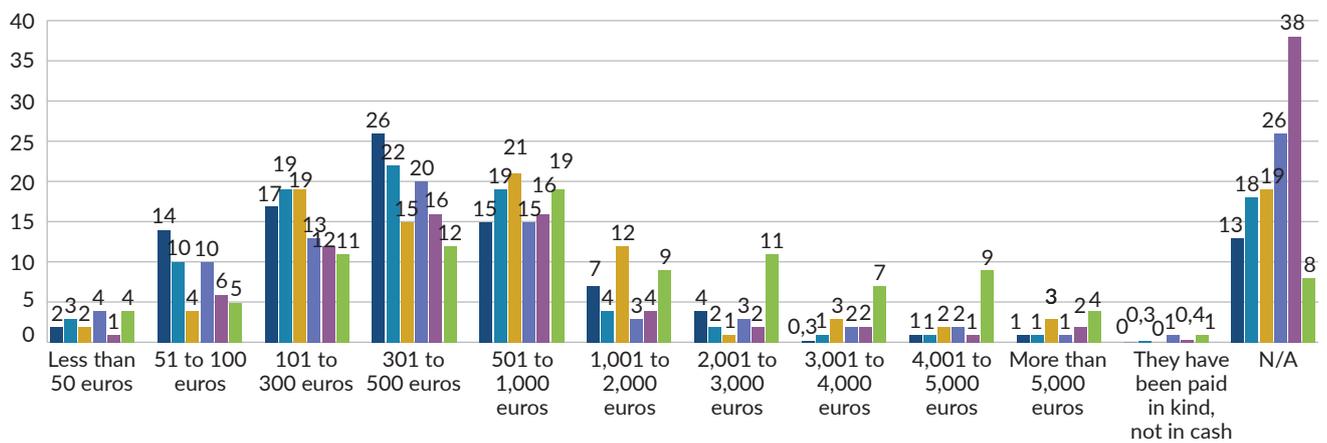
Monthly spending on unregistered purchases (% , 2018)



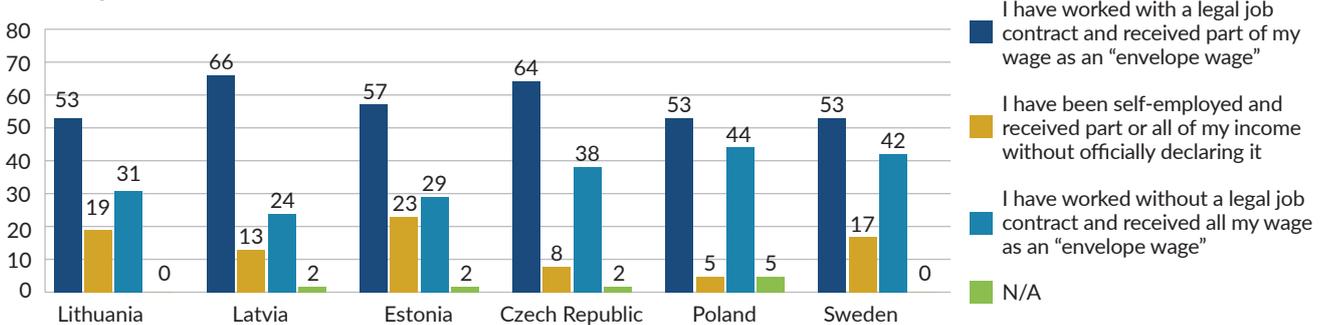
Hours spent on undeclared work by friends or relatives per week (% , 2018)



Income earned from undeclared work by friends or relatives per month (%)



Own experience in the shadow labour market (%)



## REFERENCES

- Allingham, M. G., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics*, 3(2), 323–338.
- Central Statistical Office. (2015). Praca nierejestrowana w Polsce w 2014 r. [Unregistered employment in Poland in 2014]. *Statistical information and elaborations*.
- European Commission. (2014). Undeclared work in the European Union. *Special Eurobarometer 402*.
- European Commission. (2017). *European Platform tackling undeclared work. Member State Factsheets and Synthesis Report*.
- European Commission. (2018a). Excise Duty Tables Part I – Alcoholic Beverages. *Directorate-general Taxation and Customs Union*.
- European Commission. (2018b). Excise Duty Tables Part II. Energy Products and Electricity. *Directorate-general Taxation and Customs Union*.
- European Commission. (2018c). Excise Duty Tables Part III – Manufactured Tobacco. *Directorate-general Taxation and Customs Union*.
- European Commission. (2018d). *Taxation Trends in the European Union*.
- Eurostat. (2018a). Eurostat. Real GDP growth rate – volume.
- Eurostat. (2018b). Labour cost levels by NACE Rev. 2 activity.
- Fritz Englund, A., & Lundberg, J. (2017). Världens högsta marginalskatt – en jämförelse av marginalskatterna i 31 länder [The World's Highest Marginal Tax – A Comparison of Marginal Taxes in 31 Countries]. *Timbro briefing paper #12*.
- IMF. (2015). Article IV Consultation with Sweden: Concluding Statement of the IMF Mission.
- Yitzhaki, S. (1974). A note on income tax evasion: A theoretical analysis. *Journal of Public Economics*, 3(2), 201–202.
- Kuddo, A., Robalino, D., & Weber, M. (2015). Balancing regulations to promote jobs.
- Lithuanian Free Market Institute. (2017). Employment Flexibility Index 2018.
- Meriküll, J., Rõõm, T., & Staehr, K. (2012). Perceptions of unreported economic activities in Baltic firms: individualistic and non-individualistic motives. In *(Dis) Honesty in Management* (pp. 85–125): Emerald Group Publishing Limited.
- Mickiewicz, T., Rebmann, A., & Sauka, A. J. J. o. B. E. (2017). To Pay or Not to Pay? Business Owners' Tax Morale: Testing a Neo-Institutional Framework in a Transition Environment. 1–19.
- National Institute of Economic Research. (2015). Wage Formation Report 2015. *Stockholm: NIER*.
- National Institute of Economic Research. (2017). Wage Formation Report 2017. *Stockholm: NIER*.
- Norrman, E. (2009). 'Ska det vara vitt eller svart?' – en analys av den svarta sektorns drivkrafter och problem" ['Should it be white or black?' – an analysis of the shadow sector's drivers and problems]. *Confederation of Swedish Enterprise*.
- OECD. (2018). Minimum relative to average wages of full-time workers. Retrieved from: <https://stats.oecd.org/Index.aspx?DataSetCode=MIN2AVE>
- Oxford Economics. (2018). Combatting Illicit Trade: Consumer Motivations and Stakeholder Perspectives.
- Patapas, A., & Gudonis, N. (2014). The problem of undeclared work control efficiency in Lithuania. *Public Policy and Administration*, Vol. 13, No. 4, 659–670.
- Pocius, A. (2015). Evaluation of shadow economy and informal employment in Lithuania. *Lithuanian Journal of Statistics*, Vol. 54, No.1, 18–32.
- Putniņš, T. J., & Sauka, A. (2015a). Measuring the shadow economy using company managers. *Journal of Comparative Economics*, 43(2), 471–490.
- Putniņš, T. J., & Sauka, A. (2015b). SSE Riga Shadow Economy Index 2009–2014.
- Putniņš, T. J., & Sauka, A. (2017). Shadow Economy Index of Baltic Countries 2009–2016. *SSE Riga*.
- Putniņš, T. J., & Sauka, A. (2018). Shadow Economy Index of Baltic Countries 2009–2017. *SSE Riga*.
- Respekt. (2018). Příběh Metanolových Zabijáků. Retrieved from <https://www.respekt.cz/tydenik/2014/15/pribeh-metanolovych-zabijaku>
- Scarpetta, S. (2011). Setting It Right: Employment Protection, Labour Reallocation and Productivity *IZA Policy Paper No. 27*, 16–17.
- Schneider, F., & Williams, C. C. (2013). *The Shadow Economy*. London, UK.
- Snowdon, C. (2017). Nanny State Index 2017. *Epicenter*.
- Spector, S. (2014). Minimum Wages and Wage Differentiation – what does the research say? *Stockholm: Confederation of Swedish Enterprise*.
- Swedish National Audit Office. (1998). Illicit work in Sweden, a report on a welfare state dilemma. *Rikskontrollens rapport RRV 1998:61 Stockholm*.
- Szymański, D. (2018). Min. Rafalska: 40 proc. bezrobotnych jest zarejestrowanych tylko po to, by brać ubezpieczenie zdrowotne. Retrieved from <https://businessinsider.com.pl/twoje-pieniadze/praca/elzbieta-rafalska-o-bezrobotnych-i-ubezpieczeniach-zdrowotnych/270dxws>
- Valstybinė darbo inspekcija. (2016). Ataskaita apie darbuotojų saugos ir sveikatos būklę bei darbo įstatymų vykdymą Lietuvos respublikos įmonėse, įstaigose ir organizacijose 2011–2016 metais.
- Valstybinė mokesčių inspekcija. (2017). Mokesčių mokėtojų sąmoningumo ir šešėlinės ekonomikos lygio vertinimo tyrimas. Retrieved from <http://www.vmi.lt/cms/documents/10162/8782061/Mokes%C4%8Di%C5%B3%20mok%C4%97tojų%C5%B3%20s%C4%85moningumo+ir+%C5%A1e%C5%A1%C4%97lin%C4%97s+ekonomikos+lygio+vertinimo+tyrimas/9b60fd94-9a6f-4d4a-90fd-935d50bd03e3>
- Williams, C. C., & Horodnic, I. A. (2015). Explaining and tackling the shadow economy in Estonia, Latvia and Lithuania: a tax morale approach. *Baltic Journal of Economics*, 15(2), 81–98.
- World Bank. (2004). Doing Business in 2004. Understanding regulation.
- World Bank. (2014). Doing Business Economy Profile 2015: Czech Republic. <https://openknowledge.worldbank.org/handle/10986/21267>
- World Bank. (2019). Doing Business 2019.
- Žurnalas IQ. (2017). Trys ketvirtadaliai būsto nuomos rinkos yra „šešėlyje“. Ką daryti? . Retrieved from <https://naujienos.alfa.lt/leidinys/iq/trys-ketvirtadaliai-lietuvos-busto-nuomos-rinkos-yra-seselyje-ka-daryti/>



9786098101232