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LATEST DEVELOPMENTS OF THE SHADOW ECONOMY IN THE BALTIC COUNTRIES: WHAT ARE THE MAJOR CAUSES AND WHAT COULD BE DONE?

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1. INTRODUCTION

(1) There are many political statements that tax evasion and the shadow economy are important and cause severe damage on the official economy and on public (tax) revenues.

(2) Hence, the goal of this short presentation is *threefold*:

(i) To present the size and development of the shadow economy in Lithuania and the two other Baltic countries up to 2019.

(ii) To discuss the major causes, why people work in the shadow economy.

(iii) Finally, policy measures to reduce the shadow economy are presented.

1. INTRODUCTION

➢ *A shadow economy* has many names, like cash, underground, grey or sometimes dark economy. There is no convention what the „correct" name is.

➢ A *shadow economy* is *more or less* a *parallel economy* meaning, that quite often additional activities are captured like: neighbors or friends help, do-it-yourself activities or family production. But also some criminal activities like smuggling and prostitution.

➢ Hence, the consequence is, that using macro-methodes quite often a too *"large" shadow economy* is measured.

(1) The *shadow economy* includes all legal production and provision of goods and services that are deliberately concealed from public authorities for the following four reasons:

    (i)   to avoid payment of income, value added or other taxes;

    (ii) to avoid payment of social security contributions;

    (iii) to avoid having to meet certain legal standards such as minimum wages, maximum working hours, etc.; and

    (iv) to avoid complying with certain administrative procedures.

2. THEORETICAL CONSIDERATIONS
2.1 DEFINITIONS

(2) *Underground activities* are all *illegal* actions that fit the characteristics of classical crime activities like *smuggling*, burglary, drug dealing, etc.

(3) *Informal household and do-it-yourself* activities are household actions that are not registered officially under various specific forms of national legislation.

These two activities should not be included in the shadow economy activities, but to some extent they are.

(4) *Tax evasion* is under- (or not) reporting capital and/or labor income, domestic or abroad.

What are the main causes determining the size of the shadow economy and of tax evasion? In ( ) the expected sign.

(i)   Tax and social security contribution burdens; (+)

(ii)   Intensity of regulations (+); (iii) Public Sector Services (-);

(iv)   Tax morale (-); (v) Unemployment (+);

(vi)   Self-employment (+); (vii) Size of the agricultural sector (+);

(viii) Official income (-); (ix) Quality of public institutions (-);

(x)   Federal (direct democratic) system (-)

What are the main indicators, in which shadow economy activities are reflected?

(i)   Official GDP (+/-); (ii) Cash (+); (iii) Official Employment (-)

2. THEORETICAL CONSIDERATIONS
2.3 PROBLEM OF DOUBLE COUNTING

All ten cause factors, but especially

(i)   tax burden, (ii) regulation,

(iii) unemployment, (iv) self-employment,

(v)   and size of the agricultural sector are also major driving forces for smuggling, do-it-yourself activities and neighbors help.

Hence, in the MIMIC and Currency Demand Estimations these activities are (at least) partly included; hence, these estimates are higher than the „true" shadow economy estimates.

3. ESTIMATION METHODS

THREE ESTIMATION PROCEDURES

(1) **Direct procedures** that use the micro, individual level and then estimate the size of the shadow economy. Quite often this method is done by surveys and by "calculating" discrepancies in National Accounts.

(2) **Indirect procedures** that make use of macroeconomic indicators proxying the development of the shadow economy over time; e.g. the currency demand approach.

(3) **Statistical models** that use statistical tools to estimate the shadow economy as an "unobserved" or "latent" variable; e.g. the MIMIC (Multiple Indicator, Multiple Causes) Method.

3. ESTIMATION METHODS

Table 3.1 Average relative impact of the casual variables on the shadow economy (se), averages over 2008 to 2018

Country	Personal Income Tax (PIT)	(1) Indirect taxes	Tax morale	(3) Unemploy-ment	(3) Selfemploy-ment	GDP growth	Business freedom	Average size of the se in % of GDP
Austria	15.3%	31.4%	10.5%	11.3%	19.5%	2.9%	9.0%	7.78%
Estonia	7.8%	39.2%	9.6%	18.8%	9.3%	7.4%	7.8%	27.20%
Latvia	6.5%	35.3%	12.0%	19.3%	12.4%	8.2%	6.3%	24.93%
Lithuania	7.3%	32.9%	14.6%	16.8%	15.5%	6.6%	6.2%	26.90%
Poland	4.8%	31.9%	7.3%	23.9%	23.6%	3.4%	5.0%	23.97%
Sweden	19.4%	35.1%	7.7%	14.1%	12.5%	3.4%	7.9%	13.78%

( ) rank of the importance of the impact on the shadow economy (Baltic countries, only)
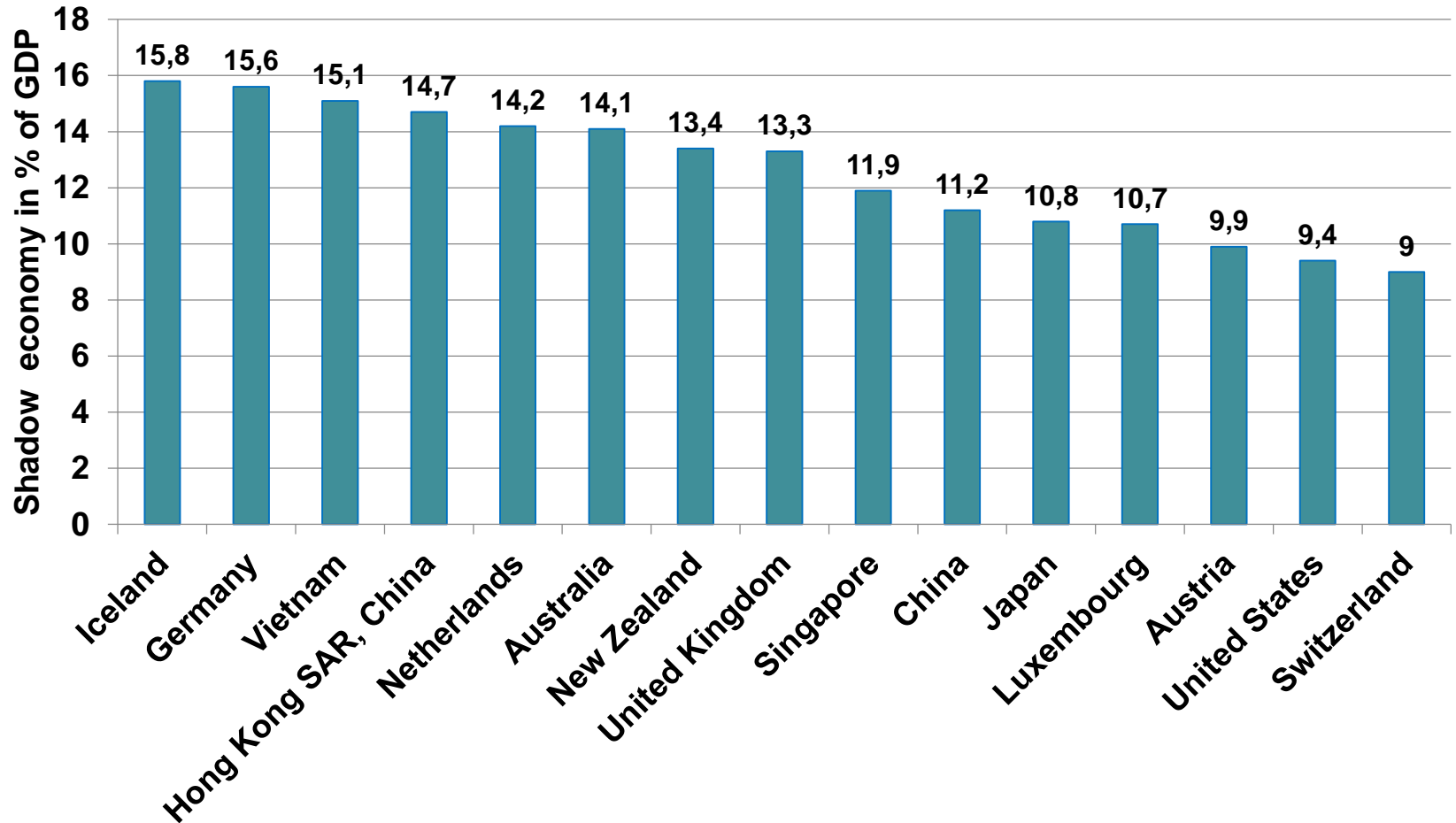
4. EMPIRICAL RESULTS OF SIZE OF THE SHADOW ECONOMY

Figure 4.1: Size of the shadow economy in % of GDP of the 15 countries with the highest and the lowest shadow economy – Part I (highest); average over 1991 to 2015.
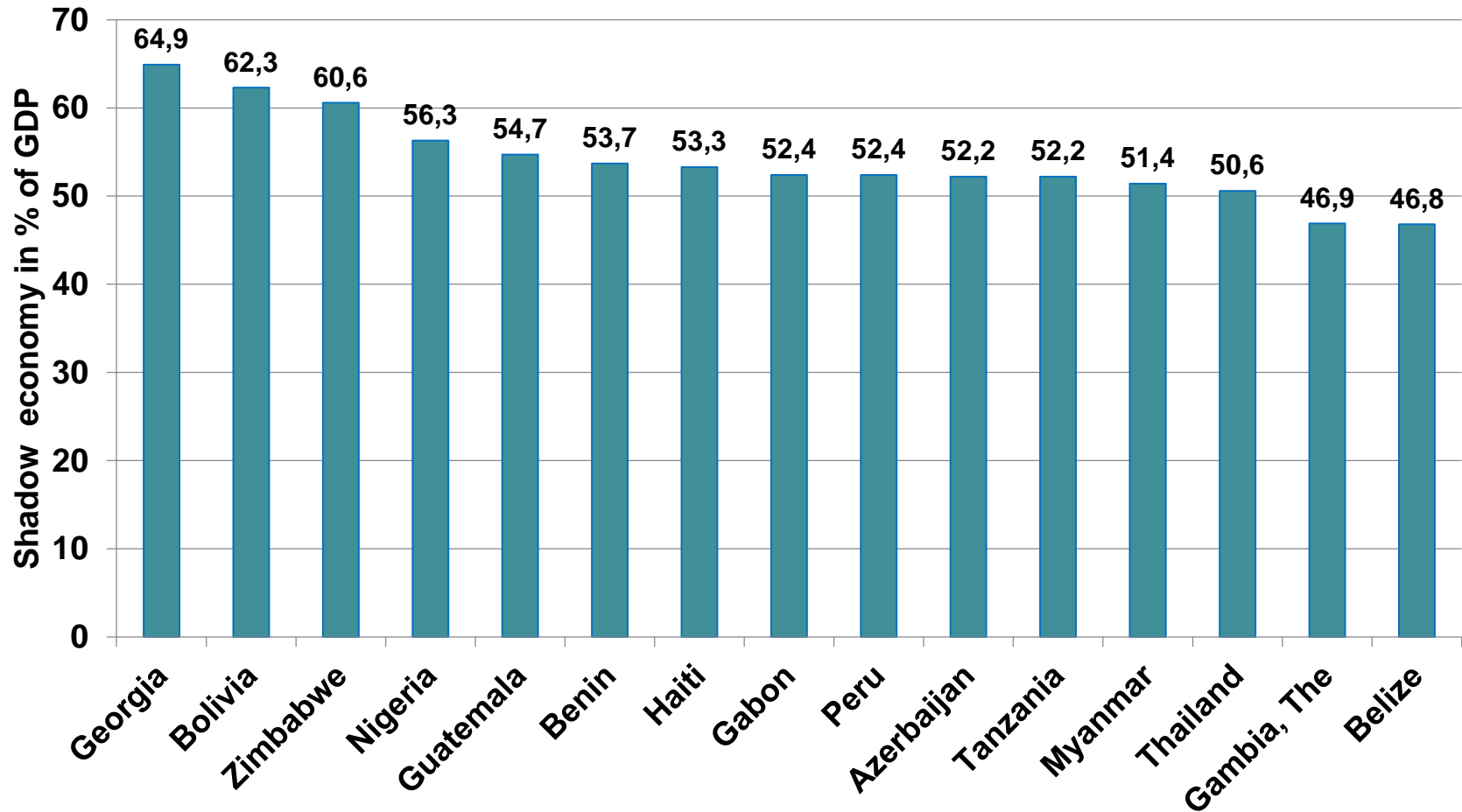
Source: Own calculations, 2017.

4. EMPIRICAL RESULTS OF SIZE OF THE SHADOW ECONOMY

Figure 4.1: Size of the shadow economy in % of GDP of the 15 countries with the highest and the lowest shadow economy – Part II (lowest); average over 1991 to 2015.

Source: Own calculations, 2017.

4. EMPIRICAL RESULTS OF SIZE OF THE SHADOW ECONOMY

Table 4.1: Decomposition of the shadow economy activities in Estonia and Germany

| Kinds of shadow economy activities (rough estimates!)	Estonia		Germany	
	Size in % of official GDP average 2009-2015	Proportion of total shadow economy	Size in % of official GDP average 2009-2015	Proportion of total shadow economy
(1) Total (macro) shadow economy (estimated by the MIMIC and calibrated by the currency demand procedures)	**28.0**	**100%**	**16.2**	**100%**
(2) Legally bought material for shadow economy and DIY-activities	**6.0**	**21%**	**3.1**	**19.1%**
(3) Illegal activities (smuggling etc.)	**2.0**	**7%**	**1.2**	**7.4%**
(4) Do-it-yourself activities and neighbors help[1)]	**2.0**	**7%**	**1.5**	**9.2%**
(5) Sum (2) and (4)	**10.0**	**35%**	**5.8**	**35.7%**
(6) "Corrected" or "adjusted" shadow economy, but legal activities (position (1) minus position (5))	**18.0**	**65%**	**10.4**	**64.2%**
[1)] Without legally bought material which is included in (2)				

Source: Own calculations, Linz, September 2016.

Table 4.2: Size of the shadow economies of different country groups *Macro-MIMIC + adj. MIMICin [ ]*

Country groups [adjusted values]	No. of countries	Size of the shadow economy[1]			
		Years 1991-1999	Years 2000-2009	Years 2010-2015	Average over 1999 – 2015
East Asia	19	25.53 [16.59]	23.86 [15.51]	21.08 [13.70]	23.49 [15.27]
Middle East and North Africa	18	27.31 [17.75]	24.34 [15.82]	23.81 [15.48]	25.15 [16.35]
Europe	37	28.12 [18.28]	24.79 [16.11]	22.77 [14.80]	25.23 [16.40]
South Asia	7	34.75 [22.59]	32.31 [21,00]	27.58 [17.93]	31.55 [20.51]
Sub-Saharan Africa	42	42.36 [27.53]	39.98 [25.99]	36.13 [23.48]	39,49 [25.67]
Latin America Caribean	24	42.29 [27.49]	39.33 [25.56]	34.80 [22.62]	38.81 [25.22]
OECD	34	21.42 [13.92]	18.84 [12.25]	18.24 [11.86]	19.5 [12.68]
Average over all countries	*181*	*31.68* [20.59]	*29.06* [18.89]	*26.34* [17.12]	*29.03* [18.87]

4. EMPIRICAL RESULTS OF SIZE OF THE SHADOW ECONOMY

Figure 4.2: The development of the shadow economy (in % of GDP) of the *Baltic countries* over 2017 to 2019 applying macro-mimic and adjusted mimic method.
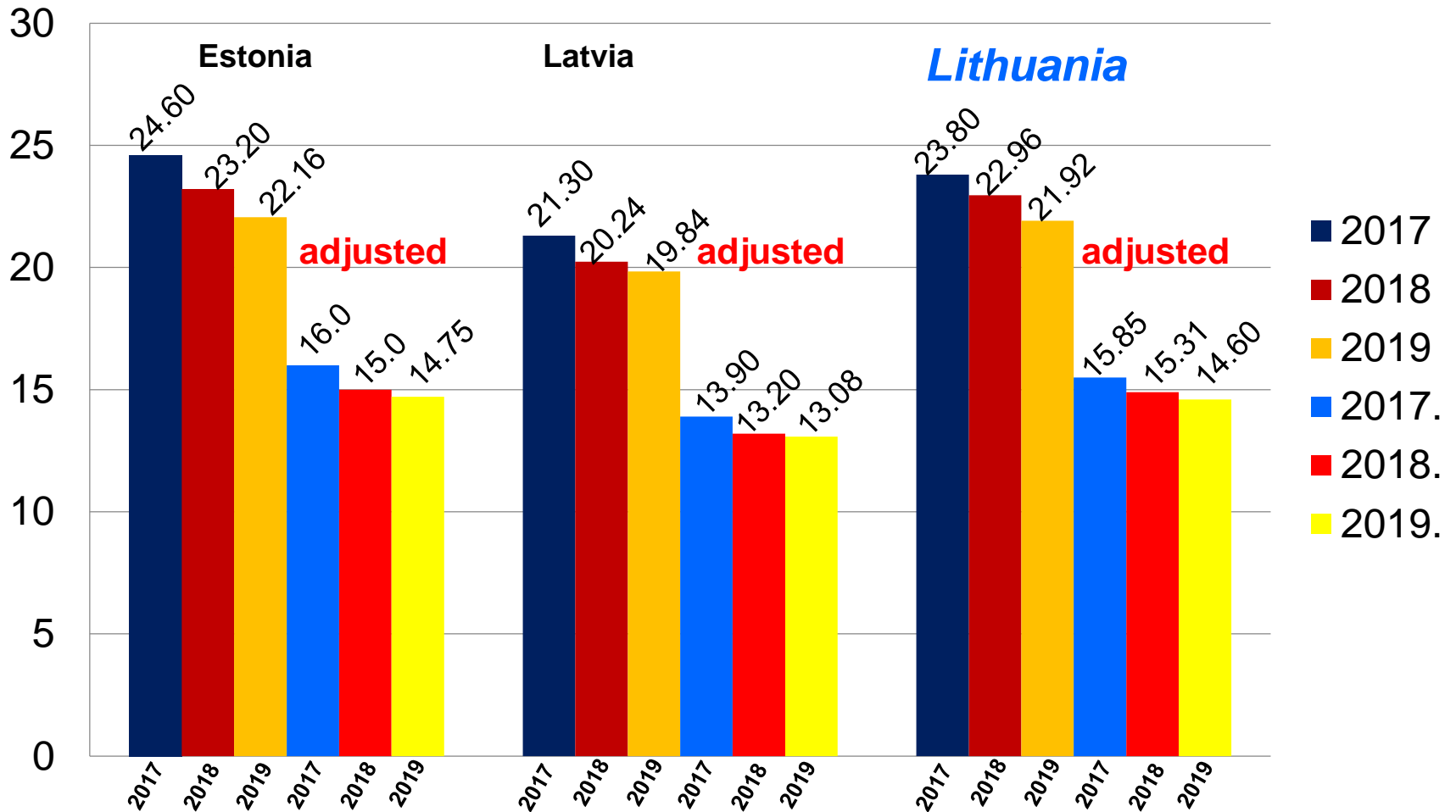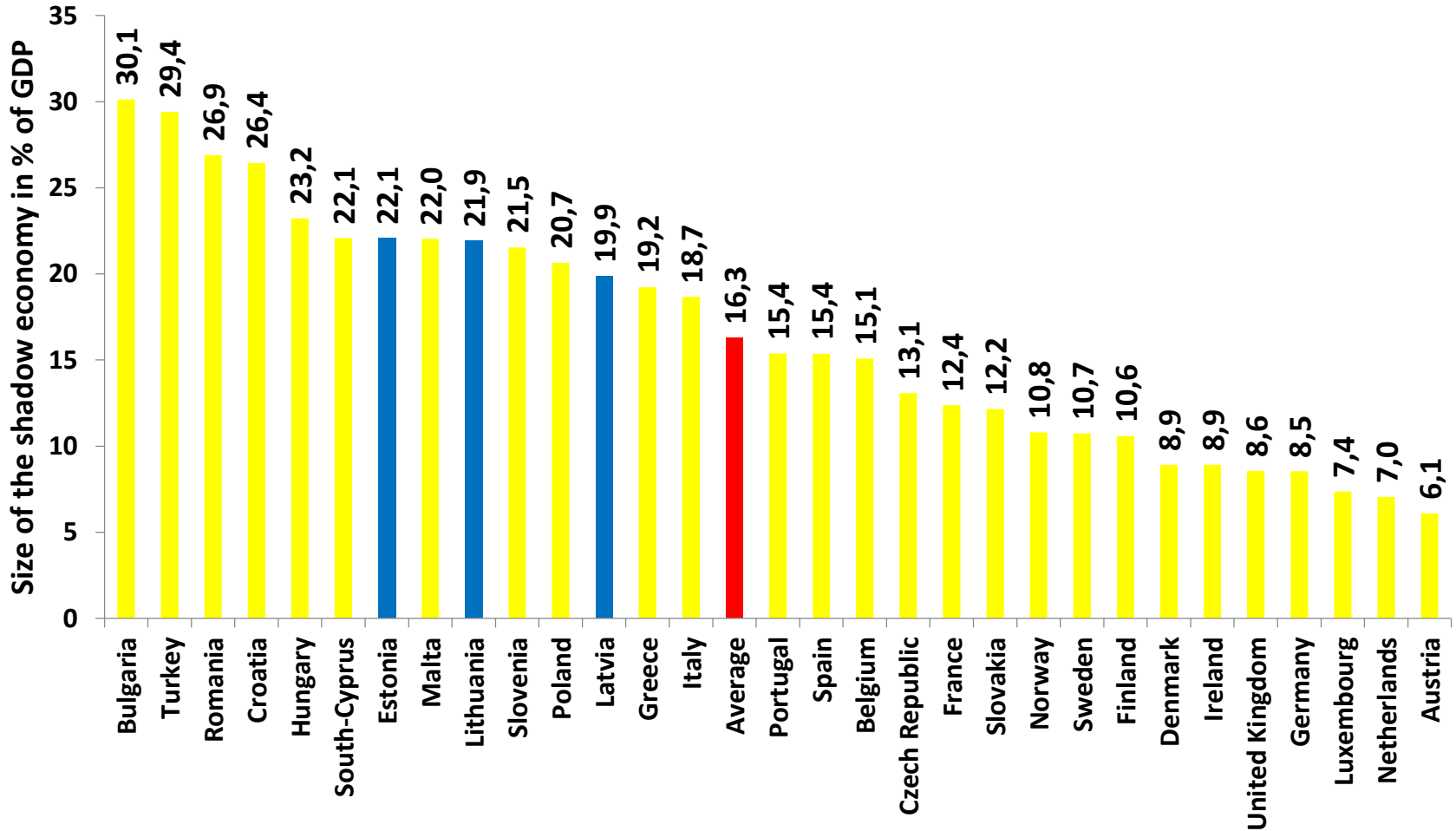
4. EMPIRICAL RESULTS OF SIZE OF THE SHADOW ECONOMY

Figure 4.3: A comparison of the size of the SE (in % of GDP) of the Baltic countries in *2015* applying three different estimation methods.

Legend:
- ■ Schneider (Makro-MIMIC)
- ■ Schneider (Corr. Adj.-MIMIC)
- ■ Putnins and Sauka (Firm Managers)
- ■ Zukauskas and Schneider (Survey Method)
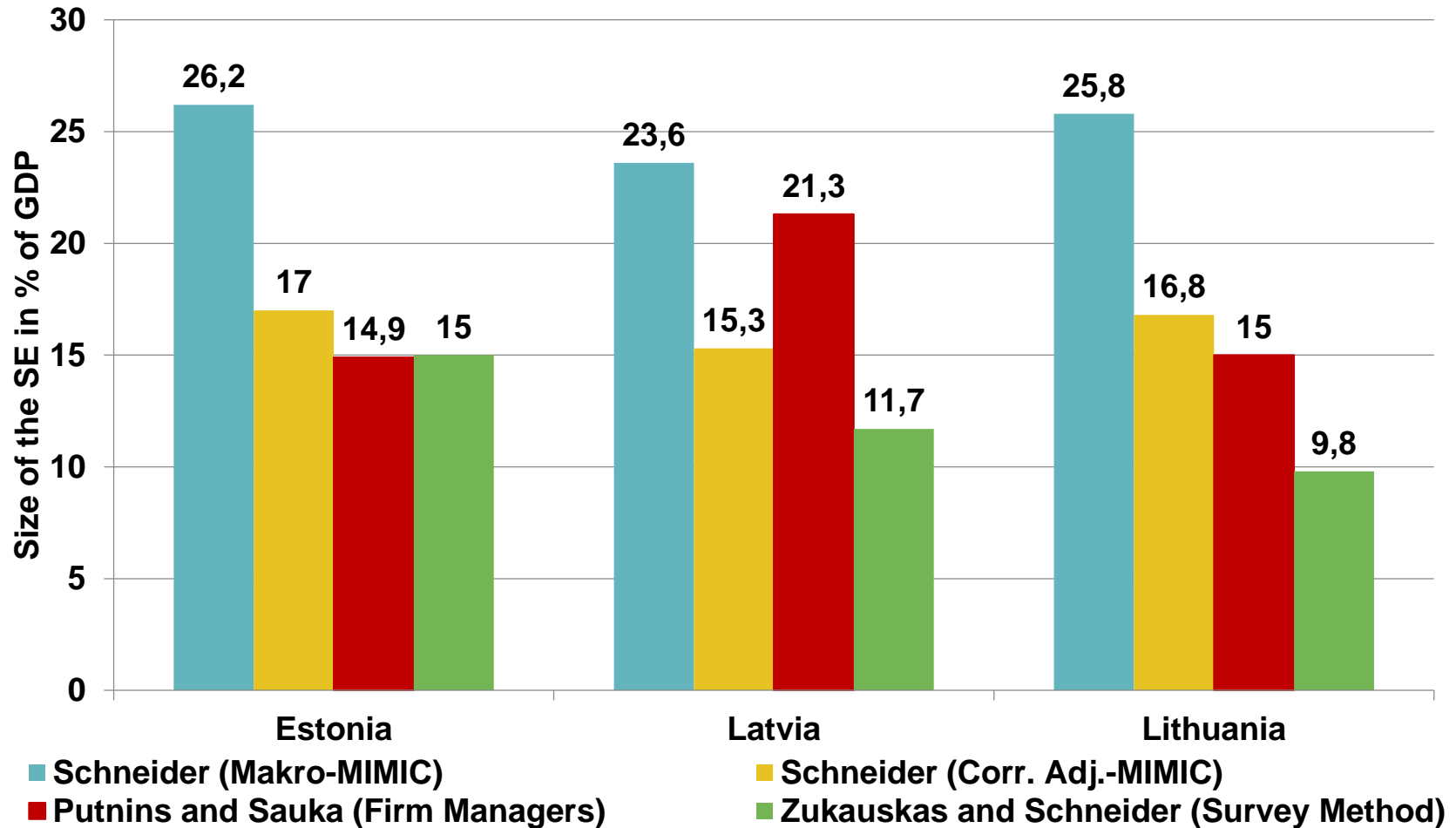
4. EMPIRICAL RESULTS OF SIZE OF THE SHADOW ECONOMY

Figure 4.4: Size of the Shadow Economy of 31 European Countries in 2019 (in % of off. GDP)

Source: Own calculations.

4. EMPIRICAL RESULTS OF THE SIZE OF TAX EVASION

Table 4.3: Size of tax evasion in % of GDP of some European Union countries in 2018

Country	Tax evasion	Tax Evasion Adj.
Bulgaria	3.9	2.6
Turkey	3.6	2.4
Croatia	3.5	2.3
Romania	3.4	2.3
South-Cyprus	3.2	2.1
Malta	3.1	2.1
Slovenia	3.0	2.0
Hungary	3.0	2.0
Poland	3.0	2.0
Greece	3.0	2.0
Estonia	2.7	1.8
Lithuania	2.4	1.6
Latvia	2.4	1.5

Source: Own calculations.

5. POLICY MEASURES
5.1 GENERAL STATEMENT

In every country the government faces the challenge to undertake policy measures which reduce a shadow economy and tax evasion.

However, the crucial question is: "Is this a blessing or a curse?"

Answers:

(1) If one assumes, that roughly 50% of all shadow economy activities complement those of the official sector (i.e. those goods would not be produced in the official sector) the development of the total (official + shadow economy) GDP is always higher than the "pure" official one.
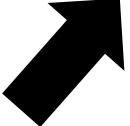
(2) A decline of the shadow economy will only increase the total welfare in every country if the policy maker succeeds in transferring a shadow economic activity into the official economy.

(3) Therefore, a policy maker has to favour and choose such policy measures that strongly increase the incentives to transfer the production from the shadow (black) to the official sector.

→ *Only then the decline of the shadow economy will be a blessing for the whole economy.*

5. POLICY MEASURES

Table 5.1:   Interactions between the shadow economy and the official economy

The shadow economy influences	through	Effects on official economy and overall economic performance
Tax system	*tax evasion* →	Redistribution policies to finance qualitative and quantitative improvement of public goods are impaired, thus economic growth may be negatively affected (Schneider (2005, 2015).
	additional tax revenues →	If the shadow economic activity is complementary to the official economy, extra income is generated via the shadow economy which is then (at least partly) spent in the official economy for goods and services (Schneider (2005, 2015).
Allocations →	*stronger competition and stimulation of markets*	more efficient use of scarce resources
		incentives for firms and individuals, stimulation of creativity and innovation
		enlargement of market supply through additional goods and services
		cost advantages of producers acting from the shadow economy may lead to ruinous competition
		problems in information flows for producers and consumers due to reduction in transparency and lack of structure in inofficial sector
Policy decisions →	*bias in officially published data* →	stabilizing, redistributional and fiscal policies may fail desired effects[*]

→ = **negative influence**   → = **positive influence**

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5.2 POLICY MEASURES AGAINST THE SHADOW ECONOMY AND TAX EVASION

Six policy measures:

(1) *Unemployment* is either controllable by the government through economic policy in a traditional Keynesian sense; or the government can try to improve the country's competitiveness to increase foreign demand.

(2) The impact of *self-employment* on the shadow economy is only partly controllable by the government. A government can deregulate the economy or incentivize *"to be your own entrepreneur"*, which would make self-employment easier, potentially reducing unemployment and positively contributing to efforts in controlling the size of the shadow economy.

(3) These two policies need to be *accompanied* with a *strengthening* of *institutions* and *trust* in *public institutions* to reduce the probability that self-employed shift reasonable proportions of their economic activities into the shadow economy, which, if it happened, made government policies incentivizing self-employment less effective.

(4) Besides these measures, policy makers should focus to *reduce overall taxation* (especially indirect taxation and custom duties).

(5) *Equally important* is the *quality of institutions*; i.e. creating democratic and transparent institutions with lesser regulatory burden, corruption and bureaucracy in order to be able to restore the trust and confidence of the people in the public institutions.

(6) *Reducing administrative burden* on businesses by simplifying the procedures for obtaining licenses, accelerating the release of documents required for entrepreneurship, reducing bureaucratic barriers for such documents and increasing transparency of the whole process.

5. POLICY MEASURES
5.3 REALIZED POLICY MEASURES TO REDUCE THE SHADOW ECONOMY BY THE LITHUANIAN GOVERNMENT

Measures of the reform; effective since January,1,2019:

(1) An opportunity to pay the „forgotten" outstanding taxes without late payment interest and penalties (6 month period) created; ended June 30, 2019.

(2) White finance of benefit to fair business: legally operating and taxpaying businesses will have better conditions to take part in public procurement and have access to bank financing.

(3) Incentives: as of 2019, citizens will be able to reduce their taxable income and get a refund of part of the personal income tax paid on car repair, housing renovation and babysitting services.

5. REALIZED POLICY MEASURES TO REDUCE THE SHADOW ECONOMY BY THE LITHUANIAN GOVERNMENT

Measures of the reform (cont.):

(4) Incentives to tackle income hiding: extension of benefit payments to 12 months after entry into employment.

(5) Simplification of tax calculation and payment: introduction of accounting service and online cash register – administrative burdens on businesses reduced.

(6) Wider application of VAT reverse charge (for oil and electronic goods) after receiving authorisation from the European Commission.

Source: Lithuanian Government, Vilnius, 2019, p.30

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THANK YOU VERY MUCH FOR YOUR ATTENTION!

APPENDIX: CRITICAL REMARKS ABOUT THE MIMIC-METHOD

Five points of major criticsm:

(1)   Only relative coefficients, no absolute values.

(2)   Estimations quite often highly sensitive with respect to changes in the data and specifications.

(3)   Difficulty to differentiate between the selection of causes and indicators; little theoretical "guidance".

(4)   The use of the calibration procedure and the choice of the starting values has great influence on the size and development of the shadow economy.

(5)   High macro values of the shadow economy and again a double counting problem