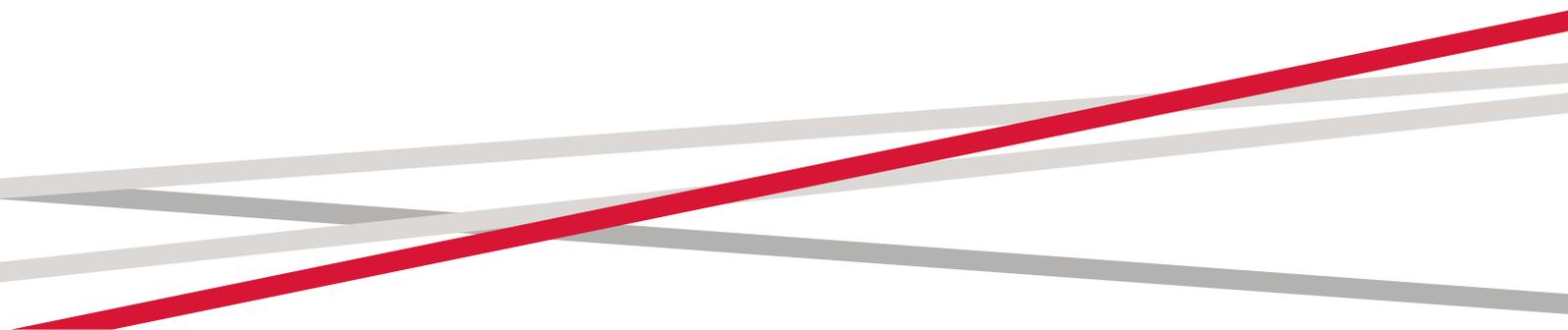


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The Shadow Economy in Russia: New Estimates and Comparisons with Nearby Countries

We apply a new method to measuring the shadow economy in Russia during the period 2017-2018 and provide evidence on the main factors that influence involvement in the shadow economy. Drawing on methodology developed by Putnins and Sauka (2015), we estimate that the size of the shadow economy in Russia is 44.7% of GDP in 2018. This is similar to the size of the shadow economy in countries such as Kyrgyzstan, Kosovo, Ukraine, and Romania, but higher than the level of the Baltic countries. Our findings are largely consistent with other less direct approaches for estimating the shadow economy. An advantage of our approach is that it can provide more detailed information on the components of the shadow economy.



Introduction and Approach to Measuring the Shadow Economy

The aim of the Shadow Economy Index, which has now been estimated in a number of countries, is to measure the size of shadow economies and explore the main factors that influence participation in the shadow economy. We use the term “shadow economy” to refer to all legal production of goods and services produced by registered firms that is deliberately concealed from public authorities (OECD, 2002; Schneider, Buehn and Montenegro, 2010).

The Shadow Economy Index draws on a survey-based methodology developed by Putnins and Sauka (2015). It combines estimates of business income that has been concealed from authorities, unregistered employees, and ‘envelope’ wages. The approach exploits the fact that entrepreneurs and business leaders are in a unique position in that they have knowledge about the amount of business income that is concealed from authorities, the number of employees that work for them unofficially, and the extent to which they pay wages informally to avoid taxes.

The challenge for such methods is to elicit maximally truthful responses about these sensitive issues, otherwise the size of the shadow economy will be underestimated. To address this challenge, we use a number of survey and data collection techniques shown in previous studies to be effective in eliciting more truthful responses (e.g. Gerxhani, 2007; Kazemier and van Eck, 1992; Hanousek and Palda, 2004). While the full details can be found in Putnins and Sauka (2015), they include confidentiality with respect to the identities of respondents, framing the survey as a

study of satisfaction with government policy, phrasing misreporting questions indirectly about “similar firms in the industry” rather than the respondent’s actual firm, gradually introducing the most sensitive questions after less sensitive questions, excluding inconsistent responses, and controlling for factors that correlate with potential untruthful response such as tolerance towards misreporting.

The Index measures the size of the shadow economy as a percentage of GDP. Computing the Index involves three steps: (i) estimate the degree of underreporting of employee remuneration and underreporting of firms’ operating income using the survey responses; (ii) estimate each firm’s shadow production as a weighted average of its underreported employee remuneration and underreported operating income, with weights reflecting the proportions of employee remuneration and firms’ operating income in the composition of GDP; and (iii) calculate a production-weighted average of shadow production across firms.

The survey about shadow activity in Russia from 2017 to 2018 was conducted between February and March 2019. We use random stratified sampling to construct samples that are representative of the population of firms in Russia drawing on the official company register and covering all regions in Russia. In total, 500 phone interviews were conducted with owners, directors, and managers of companies in Russia. We use the same methodology to collect data in other countries, which we compare with Russia, conducting a minimum of 500 interviews in each country.



Table 1. Size of the shadow economies in Russia and nearby countries

This table reports point estimates and 95% confidence intervals (in parentheses) for the size of the shadow economies as a proportion of GDP in Russia (2017-2018), Ukraine (2017-2018)*, Kyrgyzstan (2017-2018)**, Latvia, Lithuania and Estonia (2015-2018)***, Moldova (2015-2018), Romania (2015-2016)****, Poland (2015-2016)*****, Kosovo (2018) ***** using the method of Putniņš and Sauka (2015).

	2018	2017	2016	2015
Russia	44.7% (42.4%, 46.9%)	45.8% (43.4%, 48.1%)	-	-
Ukraine	38.2% (35.3%, 41.2%)	38.5% (35.5%, 41.5%)	-	-
Kyrgyzstan	44.5% (40.9%, 48.1%)	46.1% (42.4%, 49.6%)	-	-
Latvia	24.2% (21.5%, 26.8%)	22.0% (19.6%, 24.5%)	20.7% (18.0%, 22.6%)	21.3% (19.0%, 23.7%)
Lithuania	18.7% (17.0%, 20.4%)	18.2% (16.1%, 20.4%)	16.5% (14.8%, 18.3%)	15.0% (13.8%, 16.3%)
Estonia	16.7% (14.5%, 18.8%)	18.2% (16.1%, 20.3%)	15.4% (13.1%, 17.8%)	14.9% (12.4%, 17.4%)
Moldova	27.5% (24.0%, 31.0%)	29.4% (25.7%, 33.1%)	29.7% (26.9%, 32.5%)	29.8% (27.0%, 32.6%)
Kosovo	39.5% (n/a, n/a)	-	-	-
Romania	-	-	33.3% (30.4%, 36.3%)	35.6% (32.2%, 39.0%)
Poland	-	-	25.0% (22.5%, 27.4%)	24.5% (22.0%, 26.9%)

Sources:

* Lysa et al (2019)

** SIAR (2019)

*** Putnins and Sauka (2019). Data on the Baltic countries available for 2009-2018.

**** Putnins, Sauka and Davidescu (2020, forthcoming)

***** Lechmann and Nikulin (2017)

***** Mustafa et al (2019)

Size of the Shadow Economy in Russia and Nearby Countries

The estimated size of the shadow economy in Russia is 44.7% of GDP in 2018. Our estimates suggest that the year before, in 2017, the shadow economy was slightly larger with 45.8% of GDP, although the annual change is not statistically significant. For comparison with nearby countries, using the same approach, high levels of shadow economy are also found in Kyrgyzstan (44.5% of

GDP in 2018), Kosovo (39.5% of GDP in 2018), Ukraine (38.2% of GDP in 2018), and Romania (33.35% of GDP in 2016), but considerably lower levels are found in the Baltic countries, especially Estonia (16.7% of GDP in 2018). See Table 1 for the full set of estimates.

The estimates using our direct micro-level approach to measuring the shadow economy are largely consistent with other less direct approaches for estimating the size of the shadow economies, such as Schneider (2019). An advantage of the



direct micro-level approach is that it is able to provide more detailed information on the components of the shadow economy, which we turn to next.

Components and Determinants of the Shadow Economy in Russia

We find that envelope wages and underreporting of business profits stand out as the two largest components of the Russian shadow economy. Underreporting of salaries or so-called 'envelope wages' in Russia are approximately 38.7% of the true wage on average in 2018, whereas approximately 33.8% of business income (actual profits) are underreported. Unofficial employees in Russia as a percentage of the actual number of employees are estimated at 28.2% in 2018.

Some companies in Russia, rather than simply concealing part of the income or employees, are completely unregistered and therefore also contribute to the shadow economy. We estimate that such companies make up 6.1% of all enterprises in Russia.

Our findings also suggest that there is a very high level of bribery in Russia: the magnitude of bribery (percentage of revenue spent on 'getting things done') is estimated to be 26.4%, whereas the percentage of the contract value that firms typically offer as a bribe to secure a contract with the government in Russia is 20.6% in 2018. We also find that more than one-third of companies in Russia pay more than 25% of the revenue or contract value in bribes.

We find that the size of the shadow economy in all sectors of the Russian economy is close to 40% with somewhat higher levels in the construction and wholesale sectors, controlling for other

factors. Using regression analysis, we find that entrepreneurs that view tax evasion as a tolerated behaviour tend to engage in more informal activity, as do entrepreneurs that are more dissatisfied with the tax system and the government. This result offers some insights into why the size of the shadow economy in Russia is so large – it is at least in part due to relatively high dissatisfaction of entrepreneurs with the business legislation and the government's tax policy. We also find some evidence that higher perceived detection probabilities and, in particular, more severe penalties for tax evasion reduce the level of tax evasion, suggesting increased penalties and better detection methods as possible policy tools for reducing the size of the shadow economy.

Finally, while firms of all sizes participate in the shadow economy, we find that younger firms tend to do so to a greater extent than older firms. The results support the notion that young firms use tax evasion as a means of being competitive against larger and more established competitors.

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For the full report, please see: <https://www.sseriga.edu/shadow-economy-index-russia>

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