

WHY SHADOW ECONOMY AND INFORMALITY SHOULD BE SEPARATED AS CONCEPTS: RESULTS AND IMPLICATIONS OF THE SHADOW ECONOMY SURVEY IN THE POST-SOVIET REGION¹

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Abstract. The current article is intended to bring two contributions to the study of informality. Empirically, it shares the result of the shadow economy survey for the 2017 and 2018 fiscal years for Kyrgyzstan, Russia, and Ukraine. These results are used to calculate the shadow economy index estimated as a percentage of the GDP. Already established as an annual exercise for Latvia and the Baltics since 2010, the survey has been applied to Moldova and Romania (since 2016), Poland (2015-2016), and Kosovo (in 2018). In the frame of the project "SHADOW: An Exploration of the Nature of Informal Economies and Shadow Practices in the Former USSR Region," the scope of the survey was expanded to Kyrgyzstan, Russia, and Ukraine, keeping the same methodology and used for direct measurement of underground activities.² By doing this, we discuss the use of direct measurement approaches to suggest that, while quantitative approaches are useful to estimate the size of shadow economies, direct approaches can be used to integrate these data and look for deeper correlations between the persistence of shadow transactions and some societal tendencies that are not necessarily economic.

Keywords: Shadow economy, informality, informal economy, informal practices, post-Soviet region.

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² Tālis J. Putniņš and Arnis Sauka, "Measuring the Shadow Economy Using Company Managers," *Journal of Comparative Economics* 43, no. 2 (2015): 471-490.

Introduction

Across regions of the world, incomes are hidden, companies fail to report activities to the authorities, and workers face precarious employment situations. A recent report of the International Labour Organization's (ILO) estimates that two billion workers are active in the informal economy.³ Although widely present in more prosperous economic systems, developing and emerging economies are disproportionately affected. Indeed, ILO estimates that Africa, Asia, and Latin America host 93% of the world's informal employment, with a peak in Africa (where 85.8% of employment is informal) followed by Asia, the Middle East, and Latin America (68.2%, 68.6%, and 40% respectively). These percentages are likely to increase due to the devastating effects of COVID-19 on business activities. These figures unveil frightening projections given the negative effect of informal employment and shadow economy on state capacity – reducing the tax revenue and thus the state's capacity for intervention and discouraging foreign investments. In addition, informal employment also puts workers in precarious positions, depriving them of employment security, long-term perspectives, and medical and social security. Accordingly, national governments and international organizations (ILO, the World Bank, and more recently, the European Commission) have, with growing persistence, proposed measures to curb the informal sector and tackle issues such as informal labor, tax fraud, informal practices, and payments.⁴

Because of persistent informality in several spheres of public life, several scholars tended to regard post-Soviet countries as kleptocracies where a restricted elite circle capitalizes on the returns of the mining of natural resources and/or foreign aid and investments.⁵ However, despite a

³ Stefan Kuhn, Santo Milasi and Sheena Yoon, "World Employment Social Outlook: Trends 2018," Geneva: ILO (2018).

⁴ Colin Williams and Slavko Bezeredi, "Explaining and Tackling the Informal Economy: A Dual Informal Labour Market Approach," *Employee Relations; Bradford* 40, no. 5 (2018): 889-902, DOI:10.1108/ER-04-2017-0085; Colin Williams and Frédéric Lapeyre, "Dependent self-employment: Trends, challenges and policy responses in the EU," *ILO Employment Working Paper* 228 (2017).

⁵ Alexander Cooley and Jason C. Sharman, "Blurring the Line Between Licit and Illicit: Transnational Corruption Networks in Central Asia and Beyond," *Central Asian Survey* 34, no. 1 (2015): 11-28; Saipira Furstenberg, "State Responses to Reputational Concerns: The Case of the Extractive Industries Transparency Initiative in Kazakhstan," *Central Asian Survey* 37, no. 2 (2018): 28.

growing body of literature on the region, there is still little agreement on what makes the region so adverse to the development and enhancement of its governance standards, as well as the boundary between the acceptable and unacceptable.⁶ It has been argued that societal attitudes must be considered when choosing measures to tackle informality at the country and regional levels. But this had scarcely been attempted for these countries despite its potential to open new avenues of research and increase the understanding of why people, and economic actors, would decide to comply or not with state instructions and international standards.

Framed in the above debates, the current article attempts to fill this gap. This manager's survey that our team conducted in Kyrgyzstan, Russia, and Ukraine for 2017 and 2018 offers three major contributions to the debates. Empirically, this is possibly the first attempt to measure the shadow economy in the region using a direct measurement method. Our results are similar to the ones obtained through indirect measurements methods but can be regarded as complementary rather than competing since they allow us also to break down the shadow economy into three components (envelope wages, underreported employees, and revenues) and explore the motifs to remain in the shadow.⁷ This idea introduces our second major contribution. We suggest that direct measurement methods can be used to capture not only the relevance of the phenomenon but its intrinsic causes. Indirect methods can help us tell what people are engaging in, but direct methods can also shed light on why they are engaging in these informal practices. Liaising with a number of studies that developed in this direction, we believe that it is by understanding the motives behind

⁶ Hartmut Lehmann and Anzelika Zaiceva, "Informal Employment in Russia: Incidence, Determinants and Labor Market Segmentation," *Quaderni – Working Paper DSE*, no. 903 (2013): 1-74; Irina Kuznetsova and John Round, "Postcolonial Migrations in Russia: The Racism, Informality and Discrimination Nexus," *International Journal of Sociology and Social Policy* 39, no. 1/2 (2019): 52-67; Ainur Begim, "How to Retire Like a Soviet Person: Informality, Household Finances, and Kinship in Financialized Kazakhstan," *Journal of the Royal Anthropological Institute* 24, no. 4 (2018): 767-785; Claudia Baez-Camargo and Alena Ledeneva, "Where Does Informality Stop and Corruption Begin? Informal Governance and the Public/Private Crossover in Mexico, Russia and Tanzania," *Slavonic & East European Review* 95, no. 1 (2017): 49-75.

⁷ Rafael Alvarado, Brayan Tillaguango, Michelle López-Sánchez, Pablo Ponce and Cem Işık, "Heterogeneous Impact of Natural Resources on Income Inequality: The Role of the Shadow Economy and Human Capital Index," *Economic Analysis and Policy* 69 (2021): 690-704.

the choice to remain in the shadow that policymaking can eventually better address societal needs.⁸ Finally, by distinguishing between what people do and why they do so, we can propose the main distinction between two phenomena often clustered together: the shadow economy and informality. The two terms were, and sometimes still are, used almost as synonyms in some disciplines. However, recent scholarship has tended to develop in two different directions. It defines the shadow economy as the aggregate of economic activities that are willingly and intentionally concealed from the state. In particular, we refer to three main components: envelope wages, under-declared income, and under-declared workers that eventually affect a state's fiscal revenues and, therefore, state capacity.⁹ By contrast, informality has come a long way from its initial understanding as an only economic phenomenon; more recent definitions refer to a range of activities, not necessarily monetary or even strictly economic, that affect policymaking and become a vital component of state governance.¹⁰ Informality may be regarded as "the art of bypassing the state, but the very, often rational, act of bypassing a state affects the relationship between the state and society".¹¹ It forces state institutions to take into account, directly or indirectly, the role of unwritten rules and alternative currencies used to renegotiate power relations between individuals, groups of citizens, and the state itself.¹²

These considerations have informed the logic behind our questionnaire design. We were interested not only in measuring the shadow economy but

⁸ Michael Burawoy, Simon Clarke, Peter Fairbrother and Pavel Krotov, *What About the Workers? Workers and the Transition to Capitalism in Russia* (London: Verso Books, 1993), 1-248; Javlon Juraev, "Rational Choice Theory and Demand for Petty Corruption," *Journal of Eastern European and Central Asian Research* 5, no. 2 (2018): 24-33.

⁹ Tālis J. Putniņš and Arnis Sauka, "Measuring the Shadow Economy Using Company Managers," *Journal of Comparative Economics* 43, no. 2 (2015): 471-490.

¹⁰ Titos Ritsatos, "Tax Evasion and Compliance; From the Neo Classical Paradigm to Behavioural Economics, A Review," *Journal of Accounting & Organizational Change* (2014): 244-261; Michael Pickhardt and Aloys Prinz, "Behavioral Dynamics of Tax Evasion – A Survey," *Journal of Economic Psychology* 40 (2014): 1-19.

¹¹ Abel Polese, "What Is Informality? (Mapping) 'the Art of Bypassing the State' in Eurasian Spaces and Beyond," *Eurasian Geography and Economics* (2021): 1-43; Alexander Shvarts, "Russian Mafia: The Explanatory Power of Rational Choice Theory," *International Review of Modern Sociology* (2002): 69-113.

¹² Italo Pardo, "Managing Existence in Naples: Morality, Action and Structure", *Cambridge Studies in Social and Cultural Anthropology* 104 (Cambridge: Cambridge University Press, 1996); Michael Burawoy, "Transition Without Transformation: Russia's Involuntary Road to Capitalism," *East European Politics and Societies* 15, no. 2 (2001): 269-290.

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also in identifying possible factors that could explain the attitude of the entrepreneurs. This has been embedded in the survey to shed the basis for an interpretation of the persistence of shadow transactions as depending not only on the economic and business environment as well as governance indicators but also on socio-cultural factors such as the perception of institutions, authorities, and the level of interaction between members of society.

Measuring Shadow Economy/Informality in the Eurasian Region and Beyond

Being a phenomenon that is not directly observable, shadow economies are difficult to measure. The last measurement in the post-socialist region took advantage of a Multiple Indicators Multiple Causes (MIMIC) approach in 2015.¹³ It is likewise true that this was in the frame of a longitudinal study encompassing many countries in the world and thus “incidentally” also the region.

Several studies showed attempts to engage with similar concepts and were useful in identifying the most popular fields of informality research in the region, namely informal payments in the health and education sectors, housing and informal dwellings and transportation, and governance in prisons, which somehow mirror the main tendencies in the region reported in Table 1.¹⁴

What emerges from a literature survey, there are two main gaps that this article has been designed to address. First, there is little, if

¹³ The shadow economy index is calculated as the percentage of the GDP by the Global Economy, accessed May 21, 2022, https://www.theglobaleconomy.com/rankings/shadow_economy/Asia/.

¹⁴ Rakhal Gaitonde, Andrew D. Oxman, Peter O. Okebukola and Gabriel Rada, “Interventions to Reduce Corruption in the Health Sector,” *Cochrane Database of Systematic Reviews* 8 (2016); Jane Falkingham, Baktygul Akkazieva and Angela Baschieri, “Trends in Out-of-pocket Payments for Health Care in Kyrgyzstan, 2001–2007,” *Health Policy and Planning* 25, no. 5 (2010): 427–436; Angela Baschieri and Jane Falkingham, “Staying in School: Assessing the Role of Access, Availability, and Economic Opportunities – the Case of Tajikistan,” *Population, Space and Place* 15, no. 3 (2009): 205–224; Eliza Isabaeva, “«A Proper House, Not a Barn:» House Biographies and Societal Change in Urban Kyrgyzstan,” *Methodological Approaches to Societies in Transformation: How to Make Sense of Change* (2021): 165–186; Lela Rekhviashvili and Wladimir Sgibnev, “Theorising Informality and Social Embeddedness for the Study of Informal Transport. Lessons from the Marshrutka Mobility Phenomenon,” *Journal of Transport Geography* 88 (2020): 1–9; Alexander Kupatadze, “Kyrgyzstan–A Virtual Narco-state?,” *International Journal of Drug Policy* 25, no. 6 (2014): 1178–1185; Camila Nunes Dias, Michelle Butler and Gavin Slade, “Prison Gangs,” in *Prisons and Community Corrections*, eds. Philip Birch and Louise Sicard (London: Routledge, 2020), 160–172.

anything, exploration of the way shadow economies are generated, performed, and lived by those very actors that policies are supposed to address. Second, there is a significant gap concerning the study of informality and shadow economies in the Eurasian region, two things that, although conceptually separated, often account for two sides of the same tendencies and phenomena. Accordingly, the empirical section explores the relationship between actions (here referred to as shadow economy) and the perceptions and attitudes generating them (what is rather referred to, at least in the region, as informality). Besides, it will also show the way shadow economies are performed in practice, what sectors are the most important and what is the attitude toward a series of activities.

Methodological Reflections:

Why is a Direct Approach Needed to Study Informality?

The scholarship has proposed various approaches to estimate the phenomenon in a given country, and they can be classified into “direct” and “indirect” methods. Indirect methods usually draw on macro data (such as data supplied by the System of National Accounts Statistics), whereas direct methods use tax audits or surveys.¹⁵

Data supplied by the System of National Accounts Statistics was used to develop discrepancy methods used to measure both hidden and illegal activities, between national expenditure and income statistics, the discrepancy between official and actual labor force.¹⁶ The “electricity approach” uses electricity consumption as a proxy for overall economic activity and, therefore, production, while the “transaction approach” relies on measurement for a given year and calculation of its variations, and the “currency demand approach,” based on the assumption that an

¹⁵ Tālis J. Putniņš and Arnis Sauka, “Measuring the Shadow Economy Using Company Managers.”

¹⁶ György Gyomai and Peter Van de Ven, “The Non-observed Economy in the System of National Accounts,” *Statistics Brief* 18 (2014); Bruno Contini, “Labor Market Segmentation and the Development of the Parallel Economy - the Italian Experience,” *Oxford Economic Papers* 33, no. 3 (1981): 401-412; Daniela Del Boca, “Parallel Economy and Allocation of Time,” *Micros (Quarterly Journal of Microeconomics)* 4, no. 2 (1981): 13-18.

increase in the size of the shadow economy will increase demand for currency.¹⁷ Previous measurements of the shadow economy in the region have used Multiple Indicators Multiple Causes.¹⁸

Direct approaches have been criticized from different standpoints: from risks of under-reporting to the incapacity to consider figures from unregistered companies.¹⁹ Indeed, basing their sampling techniques on the national database of registered businesses, they risk missing the complete picture when too many are unregistered. Yet, this can become an advantage because companies producing illegal goods are automatically excluded, providing cleaner data than indirect surveys. Also, through a deeper investigation, direct methods offer the opportunity to explore the causes of the engagement of business actors with informal practices.

The shadow economy of a country will be most likely in between figures from (under-reporting) direct and (over-reporting) indirect approaches. However, direct approaches offer the possibility to ask questions and explore why people remain in the shadow. Indirect ones are at risk of overreporting (because they include illegal economies), but they also provide macro explanations correlating the increase of the shadow economy with one or several tendencies in the country. The shadow economy thus focuses on productive economic activities that would normally be included in national accounts, but which remain underground due to tax or regulatory burdens.²⁰

¹⁷ Simon Johnson, Daniel Kaufmann and Pablo Zoido-Lobaton, *Corruption, Public Finances and the Unofficial Economy*, vol. 2169, World Bank Publications, 1999.

¹⁸ Lars P. Feld and Friedrich Schneider, "Survey on the Shadow Economy and Undeclared Earnings in OECD Countries," *German Economic Review* 11, no. 2 (2010): 109-149; Colin Williams and Friedrich Schneider, *Measuring the Global Shadow Economy: The Prevalence of Informal Work and Labour* (Cheltenham: Edward Elgar Publishing, 2016).

¹⁹ Joy De Beyer, Chris Lovelace, and Ayda Yürekli, "Poverty and Tobacco," *Tobacco Control* 10, no. 3 (2001): 210-211; Rosalie Liccardo Pacula, Beau Kilmer, Michael Grossman and Frank J. Chaloupka, "Risks and Prices: The Role of User Sanctions in Marijuana Markets," *The BE Journal of Economic Analysis & Policy* 10, no. 1 (2010).

²⁰ Abel Polese and Friedrich Schneider, "Main Approaches Used to Estimate Illicit Markets Worldwide and What Should We Take into Account in an Estimation Exercise to Ireland," *Department of Equity and Justice of Ireland* (unpublished manuscript, 2021).

Methodology: Direct Approaches to the Measurement of Shadow Economies

The above deficiencies are the reason why, in our project, we measured the level of the shadow economy relying on a direct approach, surveying owners and top managers of companies. Before this project, the Shadow Economy Index had been applied to Latvia, Lithuania, and Estonia to provide policymakers with information for policy decisions and foster a deeper understanding of entrepreneurship processes. This business survey was implemented between March and May 2019 based on random stratified sampling, and it covered all sectors and companies' sizes, from macro to micro.

Given the topic's sensitive nature, surveys face the risk of underestimating the total size of the shadow economy due to non-response and untruthful answers. Our method minimizes this risk by employing data collection techniques shown in previous studies, increasing the effectiveness of eliciting truthful responses. These techniques include confidentiality concerning the identities of respondents; framing the survey as a study of satisfaction with government policy; phrasing misreporting questions indirectly, asking about "similar firms in the industry" rather than the respondent's actual firm; excluding inconsistent responses, and controlling for factors that correlate with potential untruthful responses, such as for tolerance towards misreporting. Phone interviews are conducted with owners, directors, and managers of companies, and they last five minutes on average. The questionnaire contains four main sections: (1) external influences and satisfaction; (2) shadow activity; (3) company and owner characteristics; and (4) entrepreneurs' attitudes.²¹ In line with other studies, to increase the response rate and its truthfulness, the questionnaire begins with non-sensitive questions about satisfaction with the government and tax policy, before moving to more sensitive ones about the shadow activity and deliberate misreporting.²² Even

²¹ Arnis Sauka, *Productive, Unproductive and Destructive Entrepreneurship: A Theoretical and Empirical Exploration*, vol. 3 (Frankfurt: Peter Lang, 2008).

²² Klarita Gërzhani, "«Did You Pay Your Taxes?» How (Not) to Conduct Tax Evasion Surveys in Transition Countries," *Social Indicators Research* 80 (2007): 555-581; Brugt Kazemier and Rob Van Eck, "Survey Investigations of the Hidden Economy: Some Methodological Results," *Journal of Economic Psychology* 13, no. 4 (1992): 569-587.

when asked indirectly, some entrepreneurs choose not to answer sensitive questions about the shadow activity. One way to avoid providing untruthful answers is to give a score of “0” to all the questions, suggesting that no shadow activity has taken place during the years under scrutiny. These cases are treated as non-responses, hence minimizing downward bias in estimates of shadow activity.

Once data has been gathered, we determined the index as a percentage of Gross Domestic Product (GDP) calculated through the income approach. GDP is hence the sum of the gross remuneration of employees (gross personal income) and the gross operating income of firms (gross corporate income). Computation of the Index proceeds in three steps: (1) we estimate the degree of underreporting of employee remuneration and underreporting of firms’ operating income using the survey responses; (2) we estimate each firm’s shadow production as a weighted average of its underreported employee remuneration and underreported operating income, with the weights reflecting the proportions of employee remuneration and firms’ operating income in the composition of GDP; (3) we calculate a production-weighted average of shadow production across firms.

In the first step, underreporting firm i ’s operating income, $UR_{i,OperatingIncome}$ is estimated directly from the corresponding survey question (7). Underreporting of employee remuneration, however, consists of two components: (1) underreporting of salaries, or “envelope wages” (question 9); and (2) unreported employees (question 8). Combining the two components, the firm i ’s total unreported proportion of employee remuneration is:

$$UR_{i,EmployeeRemuneration} = 1 - (1 - UR_{i,Salaries})(1 - UR_{i,Employees})$$

In the second step, for each firm we construct a weighted average of underreported personnel and underreported corporate income, producing an estimate of the unreported (shadow) proportion of the firm’s production (income):

$$ShadowProportion_i = \alpha_c UR_{i,EmployeeRemuneration} + (1 - \alpha_c) UR_{i,OperatingIncome}$$

where α_c is the ration of employees' remuneration to the sum of employees' remuneration and gross operating income of firms. We calculate α_c for each country, c , in each year using data from Eurostat.²³

In the third step, we take the weighted average of underreported production, $ShadowProportion_i$, across firms in country c to arrive at the Shadow Economy Index for that country:

$$INDEX_c^{ShadowEconomy} = \sum_{i=1}^{N_c} w_i ShadowProportion_i$$

The weights, w_i , are the relative contribution of each firm to the country's GDP, which we approximate by the relative amount of wages paid by the firm.

The Shadow Economy Index: Results and Discussion

Size of the Shadow Economy

Table 2 reports the aggregate size of the shadow economy as a percentage of GDP in Russia, Ukraine, and Kyrgyzstan during 2017-2018.

The size of the shadow economy in 2017–2018 is considerably larger in Russia and Kyrgyzstan than in Ukraine (*e.g.*, in 2018, the shadow economy is estimated at 44.7%, 44.5%, and 38.2% in the three countries, respectively). The size of the shadow economy has been declining in all three areas between 2017 and 2018. In Russia and Kyrgyzstan, the size of the shadow economy in 2018 contracted by 1.1% and -1.6% of GDP compared to the level in 2017, respectively. Ukraine experienced a modest contraction of 0.3%. Leandro Medina and Friedrich Schneider estimated the size of the shadow economy in Russia at 36.5% of GDP, Ukraine at 42.3%, and Kyrgyzstan at 29% in 2017 using the multiple indicator-multiple cause (MIMIC) approach.²⁴ The most

²³ The ratio is calculated using the employees' remuneration and gross operating income of firms for each country: Eurostat Database, accessed May 21, 2022, <https://ec.europa.eu/eurostat/web/main/data/database>.

²⁴ Leandro Medina and Friedrich Schneider, "Shedding Light on the Shadow Economy: A Global Database and the Interaction with the Official One," CESifo Working Paper no. 7981 (Munich, 2019).

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significant discrepancy in the projected size of the shadow economy using the two methodologies is registered in the case of Kyrgyzstan.

Unlike Schneider's indirect latent variable method, our method may offer more precise information on the components of the shadow economy and develop a comprehensive understanding of the shadow economy in each country. Specifically, Figure 1 illustrates the relative size of the components of the shadow economy in Russia, Ukraine, and Kyrgyzstan in 2018. The structure of the components of the shadow economy in Ukraine and Kyrgyzstan are similar – the most important contributing factor was unreported company income (58% and 55%, respectively), with the other two components being comparably lower. Our findings also show that unreported business income accounts for 35.3% of the total shadow economy in Russia, whereas underreporting of salaries and underreporting of employees account for, accordingly, 32.1% and 32.6% of the entire shadow economy in Russia.

Figure 2 illustrates the underreporting of business income (profits), underreporting of the number of employees (percentage of the actual number of employees), and underreporting of salaries (percentage of actual salaries) in Russia, Ukraine, and Kyrgyzstan. The highest magnitude of underreporting of salaries (percentage of actual salaries) is recorded in Kyrgyzstan; companies in Kyrgyzstan most often underreport 31%-50% of actual salaries. Similarly, more than 50% of companies in Russia and Kyrgyzstan underreport 11%-50% of actual business profits.

Regarding the underreporting of the number of employees, the most substantive positive component change was observed in Ukraine, from 27.6% in 2017 to 19.8% in 2018. However, almost 70% of the Kyrgyzstan respondents believe that companies in their sector underreport their number of employees by 11%-50%. In the absence of a documented job contract, workers are unable to use formal enforcement measures. Market reforms that address worker-employer information asymmetry and enhance reputational mechanisms to punish opportunistic agents might help to alleviate contract enforcement issues.²⁵

²⁵ Karthikeya Naraparaju, "Impediments to Contract Enforcement in Day Labour Markets: A Perspective from India," *Journal of Institutional Economics* 12, no. 3 (2016): 651-676.

Institutions impact how a country allocates entrepreneurial resources, influencing the quality of entrepreneurship by influencing the “rules of the game.”²⁶ On the other hand, entrepreneurs react actively to the environment they find themselves in by influencing the institutions.²⁷ Figure 3 indicates the magnitude of bribery (percentage of revenue spent on “getting things done”); the figures for Ukraine and Kyrgyzstan are lower. Russian companies spend approximately 26.4% of revenue on payments “to get things done” and around 20.6% to secure a contract with the Government. Needless to say, these are very high numbers indicating major challenges concerning bribery in Russia. Figure 4 further shows the distribution of bribery: to “get things done” and secure contracts with the Government within a given range, indicating that more than one-third of companies in Russia pay in bribes more than 25% of the revenue or contract value.

Figure 5 summarizes how the size of the shadow economy varies by sector, showing that the size of the shadow economy in all sectors is close to 40% or more. For instance, the survey in Kyrgyzstan showed that in 2018 the shadow economy permeated 50% of wholesale and 47.1% of the manufacturing sector. The results are staggering also in the retail (46.3%), services (43.4%), and construction sectors (38%). The miscellanea category covered by all the others is affected at 33%.

Figure 6 shows that shadow activity in Russia and Ukraine is not a phenomenon that can only be observed in relatively small companies. Even though the shadow economy is relatively low in companies that employ 6-10 employees in Russia and 61-100 employees in Ukraine, in all other groups, we find the level of the shadow economy close to 40% and higher.

The Influence of Attitudes and Beliefs on Shadow Economic Activity

Rational-choice theory of crime, applied to tax evasion, argues that individuals decide whether to evade taxes by weighing up the expected

²⁶ William J. Baumol, “Entrepreneurship: Productive, Unproductive, and Destructive,” *Journal of Business Venturing* 11, no. 1 (1996): 3-22.

²⁷ Magnus Henrekson and Tino Sanandaji, “The Interaction of Entrepreneurship and Institutions,” *Journal of Institutional Economics* 7, no. 1 (2011): 47-75.

benefits of not paying taxes on the one hand against the risk of being caught and the penalties if caught on the other.²⁸ Thus, we include additional questions about entrepreneurs' perceptions of the likelihood of being caught for underreporting business profits, number of employees, salaries, and bribery involvement. We also ask entrepreneurs to evaluate potential consequences for the firm if it were caught for deliberate misreporting. Figures 7 and 8 summarize the results on perceived probabilities of being caught and expected consequences. Despite the high figures suggesting that informality is widely present in the region, many entrepreneurs in Russia, Ukraine, and Kyrgyzstan perceive the risk of being caught when underreporting income, salaries, and employees as relatively high (Figure 7).

Regarding consequences, only approximately one-third of respondents in Russia and Ukraine expect the penalty to be a severe fine that would impact competitiveness, while 55% of Kyrgyz businesses believed that the consequences would be substantial (Figure 8).

Tax Morale

Existing empirical evidence suggests that higher levels of tax morale lead to less involvement in tax evasion.²⁹ Thus, smaller shadow economies at the aggregate level. Tax morale is usually defined as a moral obligation to pay taxes and "a belief in contributing to society by paying taxes."³⁰ Figures 9 and 10 present the results related to tax morale. In summary, entrepreneurs in Russia have an "average" tax morale of 2.4 to 2.8 (on a scale from 1-5, where 1 is very high tax morale and 5 is very low tax morale). Approximately 40% of respondents in Russia are highly tolerant of bribery. This relatively high tolerance for bribery may explain (at least to some extent) the fairly high levels of bribery in Russia

²⁸ Michael G. Allingham and Agnar Sandmo, "Income Tax Evasion: A Theoretical Analysis," *Taxation: Critical Perspectives on the World Economy* 3, no. 1 (1972): 323-338.

²⁹ Michael Pickhardt and Aloys Prinz, "Behavioral Dynamics of Tax Evasion – A Survey," *Journal of Economic Psychology* 40 (2014): 1-19.

³⁰ Benno Torgler and Friedrich Schneider, "The Impact of Tax Morale and Institutional Quality on the Shadow Economy," *Journal of Economic Psychology* 30, no. 2 (2009): 228-245.

compared to other countries. In Ukraine, interviewees seem less forgiving of tax evasion, with 75.7% believing it is unacceptable. However, tax avoidance is acknowledged as the most tolerated practice.

When Kyrgyz respondents were asked if they believed that other companies would consider tax avoidance an acceptable behavior, 30.9% disagreed, and 23.5% strongly disagreed with the statement. However, when asked to express themselves whether tax avoidance was a legitimate behavior, 38% agreed, and 45.2% disagreed, corroborating the suggestion that a certain behavior seems more unacceptable when performed by others, but, when you are concerned in the first person, one can always find a moral justification, a finding also remarked for Ukrainian entrepreneurs.³¹

Satisfaction Degree toward the Government and Tax Authority

An increasing number of studies show that trust in public officials, as well as entrepreneurs' satisfaction with tax policies and business legislation, are among the factors that foster higher tax compliance and a greater willingness to report corruption.³² When entrepreneurs believe an institution is unfair or unbeneficial, they might try to evade its effect or move to change it through institutional entrepreneurship.³³ Accordingly, we measure firms' attitudes using four questions about their satisfaction with the State Revenue Service, the Government's tax policy, business legislation, and state support for entrepreneurs. Our findings suggest that firms in all three countries are more satisfied with the State Revenue

³¹ Abel Polese, "Informal Payments in Ukrainian Hospitals: On the Boundary Between Informal Payments, Gifts, and Bribes," *Anthropological Forum* 24, no. 4 (2014): 381-395.

³² Chiara Amini, Elodie Douarin and Tim Hinks, "Individualism and Attitudes Towards Reporting Corruption: Evidence from Post-communist Economies," *Journal of Institutional Economics* 18, no. 1 (2022): 85-100; Sofie Marien and Marc Hooghe, "Does Political Trust Matter? An Empirical Investigation into the Relation Between Political Trust and Support for Law Compliance," *European Journal of Political Research* 50, no. 2 (2011): 267-291; Eugen Dimant and Thorben Schulte, "The Nature of Corruption: An Interdisciplinary Perspective," *German Law Journal* 17, no. 1 (2016): 53-72.

³³ Magnus Henrekson and Tino Sanandaji, "The Interaction of Entrepreneurship and Institutions," *Journal of Institutional Economics* 7, no. 1 (2011): 47-75.

Service and less satisfied with the Government's support for entrepreneurs (Figure 11). Overall satisfaction with the Government and the tax system is relatively low, which may explain (at least to some extent) the fairly high levels of the shadow economy.

Discussion and Conclusion

In this article, we have examined the dynamics of the shadow economy in Russia, Ukraine, and Kyrgyzstan from 2017 to 2018 and identified the primary elements that impact entrepreneurs' participation in the shadow economy. When surveying the region, it is easy to gather the impression that the shadow economy is ubiquitous.³⁴ This is misleading in at least two ways. First, analysts and practitioners often advise local governments based on ultimate models of institutions and practices that exist only in an ideal world but not necessarily in any country, regardless of its development. By doing this, they deceive local elites into thinking that the proposed model represents a blanket solution for everything and is feasible. Yes, the experience of countries with smaller shadow economy sizes tells us that it is possible to reduce it, but there is no evidence that informality, as a broader phenomenon also considering non-monetary transactions, will be reduced. This is also, *inter alia*, depending on the way state-citizen and state-society relationship are constructed.³⁵

Business reputation, power relations in an office, or even elite politics are largely based on informal relations between concerned actors. In large companies, posts demanding a high degree of responsibility (*i.e.*, the top manager of a large corporation) are rarely distributed through open

³⁴ Leyla Sayfutdinova, "Post-Soviet Small Businesses in Azerbaijan: The Legacies of the Soviet Second Economy," *Caucasus Survey* 5, no. 1 (2017): 11-26; Kristof Van Assche, Anastasiya Shtaltovna and Anna-Katharina Hornidge, "Visible and Invisible Informalities and Institutional Transformation in the Transition Countries of Georgia, Romania, and Uzbekistan," in *Informality in Eastern Europe*, eds. Christian Giordano and Nicolas Hayoz (Bern: Peter Lang, 2013), 89-118.

³⁵ Ruth Dukes and Wolfgang Streeck, "From Industrial Citizenship to Private Ordering? Contract, Status, and the Question of Consent," *MPIfG Discussion Paper*, no. 20/13 (2020): 1-42; Wolfgang Streeck, "Taking Capitalism Seriously: Towards an Institutional Approach to Contemporary Political Economy," *Socio-Economic Review* 9, no. 1 (2011): 137-167.

competition. It is more likely that an informal pre-selection would take place, and current managers would have to propose someone they see as trustworthy.

Traditional shadow economy measurements allow quantifying some socio-economic phenomena correlated with low state efficiency.³⁶ To be able to address a deficiency in governance, it is essential to understand why people engage in such behavior.³⁷ By understanding their motives, incentives can be identified and used to enhance compliance by the citizens.³⁸ This is where informality (theory) may help better understand how things work in a region or a particular situation. We calculated the level of the shadow economy in the country as a share of the GDP, thus mostly in economic terms while taking into account non-monetary practices. Acknowledging informality means accepting that human agency plays a significant role in public policy and state management and suggests two things.³⁹

First, work on trust. If citizens trust their state, and in turn, the state has reasonable claims, they are more likely to abide by the state's instructions. The other is to stop being obsessed with informality, which is not bad per se. Informality can help people deal with a situation where formal rules do not apply and where they don't have any previous knowledge of how to solve a given case. The problem arises when informality systematically replaces formal rules and affects state capacity at the macro level.⁴⁰

Second, what we know about informality could be combined and used to improve the quality of governance. We do not suggest that

³⁶ Ruslan Dzarasov, *The Conundrum of Russian Capitalism: The Post-Soviet Economy in the World System* (London: Pluto Press, 2014); Tobias Holzlehner, "Shadow Networks: Border Economies, Informal Markets, and Organized Crime in Vladivostok and the Russian Far East," (PhD diss., University of Alaska Fairbanks, 2006), <http://hdl.handle.net/11122/8913>.

³⁷ Jake Fleming, "Toward Vegetal Political Ecology: Kyrgyzstan's Walnut-fruit Forest and the Politics of Graftability," *Geoforum* 79 (2017): 26-35; Olga Sasunkevich, "«But I liked it, I liked it:» Revealing Agentive Aspects of Women's Engagement in Informal Economy on the EU External borders," *European Journal of Women's Studies* 26, no. 2 (2019): 117-131.

³⁸ Christian Schubert, "Exploring the (Behavioural) Political Economy of Nudging," *Journal of Institutional Economics* 13, no. 3 (2017): 499-522.

³⁹ Ruth Dukes and Wolfgang Streeck, "Labour Constitutions and Occupational Communities: Social Norms and Legal Norms at Work," *Journal of Law and Society* 47, no. 4 (2020): 612-638.

⁴⁰ Amartya Sen, Master Amartya Sen, James E. Foster, Sen Amartya and James E. Foster, *On Economic Inequality*, (Oxford: Oxford University Press, 1997).

coercion or tighter controls will not work.⁴¹ But they will be more effective when combined with measures reinstating trust in the state and making entrepreneurs feel part of a community, addressing their responsibility and contributing to their society's development.⁴²

Evidence suggests that economic damage resulting from high levels of informality has been best reduced only by prompting changes in individual (and then societal) behavior and attitudes towards the state.⁴³ This has included creating incentives to re-channel shadow companies and activities into more legal spheres of the economy and offering attractive opportunities in the formal economy to informal workers. Morality is contextual and the overlapping of individual, societal, and state morality is not automatic but rather the result of the efforts by a state to create the conditions to encourage its citizens to comply with state morality.⁴⁴

The main question here is not "what is the size of the shadow economy." There is no real difference if the final calculations show 30 or 40%. What is essential is that the shadow economy occupies a significant share of the daily economy, is composed of widely spread practices, and affects state capacity. As a corollary, and possibly even more critical, interventions should consider the socio-cultural and policy elements that have led to an increase in the shadow economy. This is not necessarily

⁴¹ Ricciuti, Roberto, Antonio Savoi and Kunal Sen, "How do political institutions affect fiscal capacity? Explaining taxation in developing economies," *Journal of Institutional Economics* 15, no. 2 (2019): 351-380.

⁴² Amartya Sen, "Maximization and the Act of Choice," *Econometrica: Journal of the Econometric Society* (1997): 745-779; Thomas Piketty, "Hypercapitalism: Between Modernity and Archaism," in *Capital and Ideology*, ed. Thomas Piketty (Cambridge: Harvard University Press, 2020), 648-716; Thomas Piketty, "Capital and Ideology," in *Capital and Ideology*, ed. Thomas Piketty (Cambridge: Harvard University Press, 2020), 862-966.

⁴³ Rustamjon Urinboyev, "Migration and Transnational Informality in Post-Soviet Societies: Ethnographic Study of Po Rukam ('Handshake') Experiences of Uzbek Migrant Workers in Moscow," in *Migrant Workers in Russia*, eds. Anna-Liisa Heusala and Kaarina Aitamurtopp, (London: Routledge, 2016), 80-103; Baliyar Sanghera, "The Moral Economy of Post-Socialist Capitalism: Professionals, Rentiers and Fraud," in *Neoliberalism and the Moral Economy of Fraud*, eds. David Whyte and Jörg Wiegratz (London: Routledge, 2016), 57-71.

⁴⁴ Pierre Bourdieu, "The Forms of Capital," in *Handbook of Theory and Research for the Sociology of Education*, ed. J. G. Richardson (New York: Greenwood Press, 1986), 241-258; Pierre Bourdieu, *The Social Structures of the Economy* (Cambridge: Polity, 2005).

visible through indirect methods but becomes more understandable when we consider informality as “the act of bypassing the state.” Informality is here to stay, but what we can try to influence are the aspects of public life in which informality stays.⁴⁵

Therefore, we, hope that our work can be a starting point for a new stream of investigations about the motifs behind informal behavior and that can allow identifying possible ways to improve public governance.⁴⁶ Deviation from state morality is common in most societies and results in criminal or antisocial behavior. However, when a vast portion of the citizens, or whole segments of a population, do not manage to comply with these rules, this should prompt a reflection. Are we observing a special population where deviation from standards is higher because people are particularly evil-oriented? Or simply, the state is asking for too much (or too fast or with no clear instructions) for things people cannot give in the short run or that conflict with what citizens can offer. The question initially asked by James C. Scott in his studies on the moral economy is of utmost relevance to debates on the welfare state.⁴⁷

⁴⁵ Morris, Jeremy, and Abel Polese, “Conclusion: Agency Strikes Back? Quo Vadis Informality?” *Informal Economies in Post-socialist Spaces: Practices, Institutions and Networks* (2015): 294-299.

⁴⁶ Nils C. Köbis, Daniel Iragorri-Carter and Christopher Starke, “A Social Psychological View on the Social Norms of Corruption,” *Corruption and Norms: Why Informal Rules Matter* (2018): 31-52; Roberta Muramatsu and Ana Maria Bianchi, “Behavioral Economics of Corruption and Its Implications,” *Brazilian Journal of Political Economy* 41 (2021): 100-116.

⁴⁷ James C. Scott, *The Moral Economy of the Peasant Subsistence and Rebellion in Southeast Asia*, (New Haven: Yale University Press, 1976).

Table 1

Main tendencies of informality in the Eurasian region

Classic	Contribution to debates
Corruption	In addition to bribing, informal payments have shed light on the personal side of economic relations that sometimes drifts into activities simplistically classified as “corrupted”
Shadow economy	In addition to attempts to measure shadow economies, some regional studies have tested novel measurement methodologies
Informal governance	Before and after the “corruption line” there are activities that depend on inter-personal relations that influence top or mid-range politics
State-citizen relations, dependency and the everyday	Citizens not respecting the rules, or engaging in illegal activities, can be seen as attempting to survive, boycotting, or protesting the state

Source: adapted from Polese 2019.¹

Table 2

Size of the shadow economy²

Country	2018	2017	2017-2018
Russia	44.7% (42.4%, 46.9%)	45.8% (43.4%, 48.1%)	-1.1% (-1, -1.2)
Ukraine	38.2% (35.3%, 41.2%)	38.5% (35.5%, 41.5%)	-0.3% (-0.2, -0.3)
Kyrgyzstan	44.5% (40.9%, 48.1%)	46.1% (42.4%, 49.6%)	-1.6% (-1.5, -1.5)

Source: This table was made by the authors based on the analyzed collected data.

¹ Abel Polese. “Informality in Ukraine and beyond: one name, different flavours... with a cheer for the Global Encyclopaedia of Informality” (2019), accessed Mai 21, 2022, https://www.in-formality.com/wiki/index.php?title=Informality_in_Ukraine_and_beyond:_one_name,_different_flavours...with_a_cheer_for_the_Global_Encyclopaedia_of_Informality

² The size of the shadow economies as a percentage of GDP is calculated using point estimates and 95 percent confidence intervals in this table. The last column shows the shadow economy’s proportional size change from 2018 to 2017.

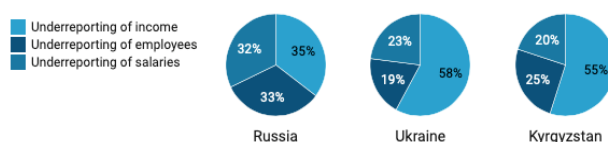


Figure 1. Components of the shadow economy, 2018

Source: This table was made by the authors based on the analyzed collected data.

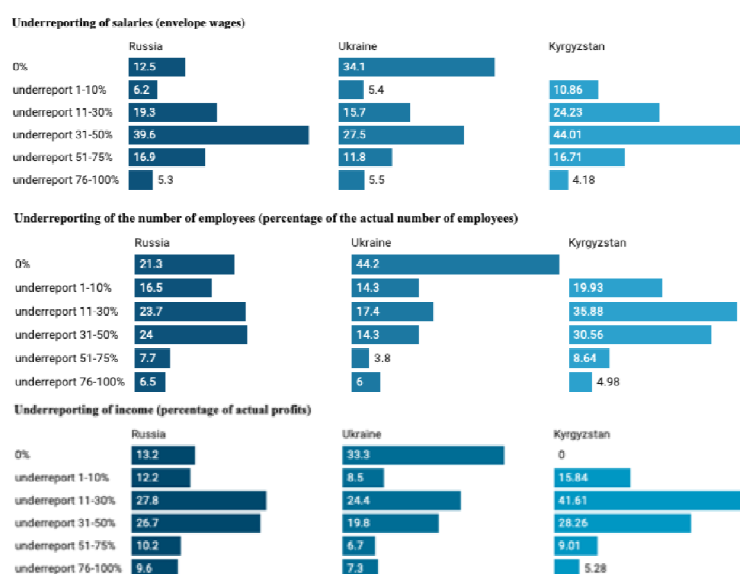


Figure 2. Underreporting of income (percentage of actual profits), underreporting of the number of employees, and underreporting of salaries, 2018
Source: This table was made by the authors based on the analyzed collected data.

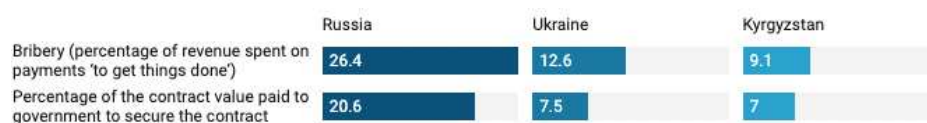
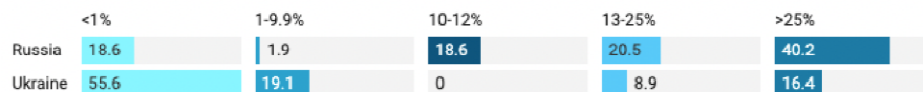


Figure 3. Bribery (percentage of revenue spent on payments "to get things done") and percentage of the contract value paid to the government to secure the contract, 2018
Source: This table was made by the authors based on the analyzed collected data.

Bribery (percentage of revenue spent on payments 'to get things done')



The percentage of the contract value paid to government to secure the contract

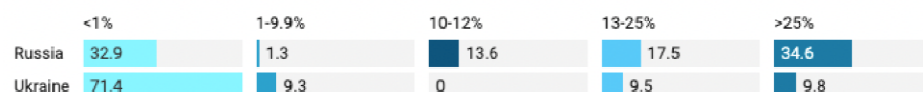


Figure 4. Bribery (percentage of revenue spent on payments “to get things done”) and percentage of the contract value paid to the government to secure the contract, 2018

Source: This table was made by the authors based on the analyzed collected data.

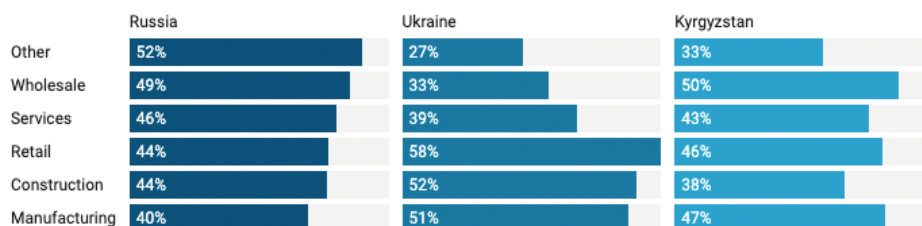
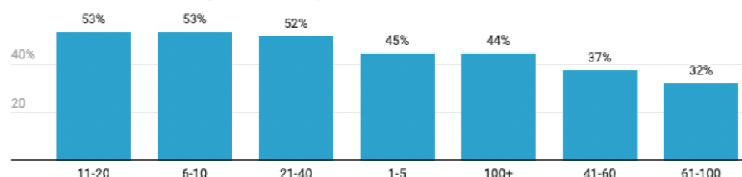


Figure 5. Size of the shadow economy (% of GDP) by sectors, 2018

Source: This table was made by the authors based on the analyzed collected data.

Size of the shadow economy (% of GDP) by firm size in Ukraine



Size of the shadow economy (% of GDP) by firm size in Russia

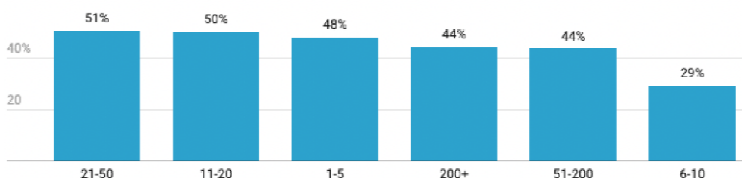


Figure 6. Size of the shadow economy (% of GDP) by firm size (number of employees), 2018

Source: This table was made by the authors based on the analyzed collected data.

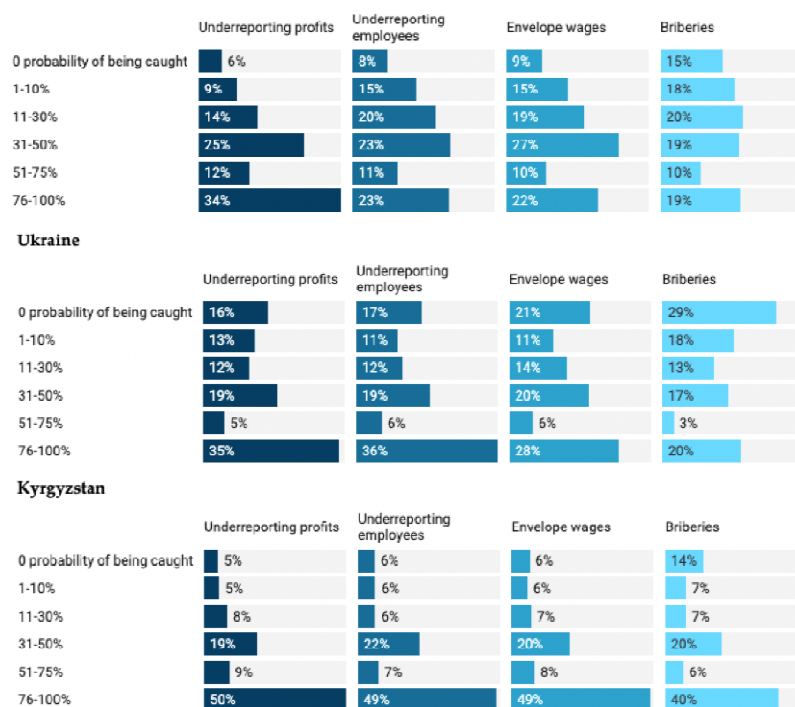


Figure 7. Business people's perceptions of the chances of being caught, 2018
Source: This table was made by the authors based on the analyzed collected data.

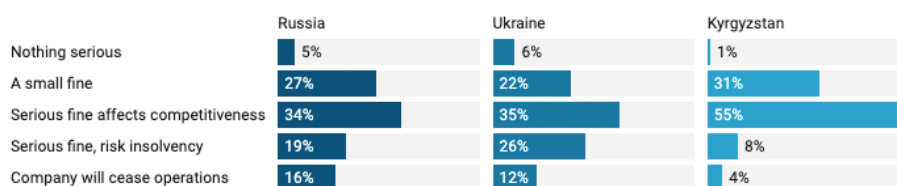


Figure 8. Most likely consequences if caught deliberately underreporting, 2018
Source: This table was made by the authors based on the analyzed collected data.

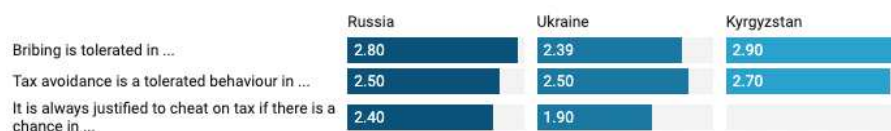


Figure 9. Tax morale, 2018
Source: This table was made by the authors based on the analyzed collected data.

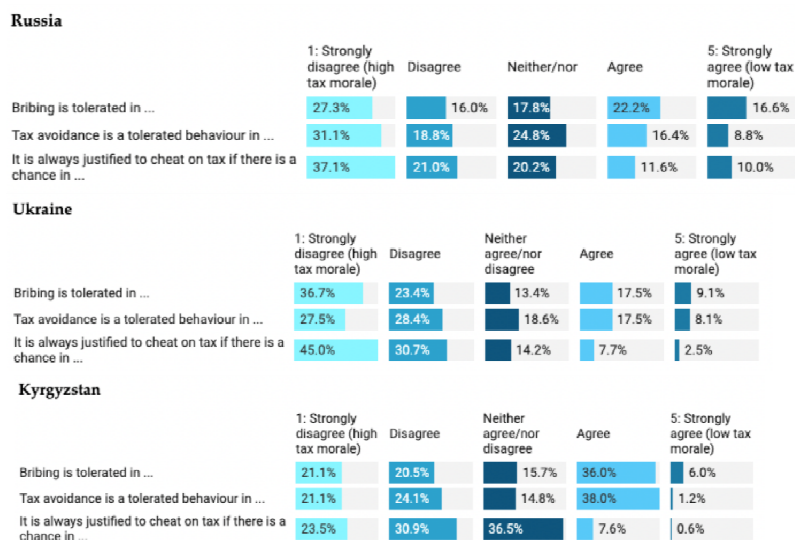


Figure 10. Tax morale: the distribution of responses, 2018

Source: This table was made by the authors based on the analyzed collected data.

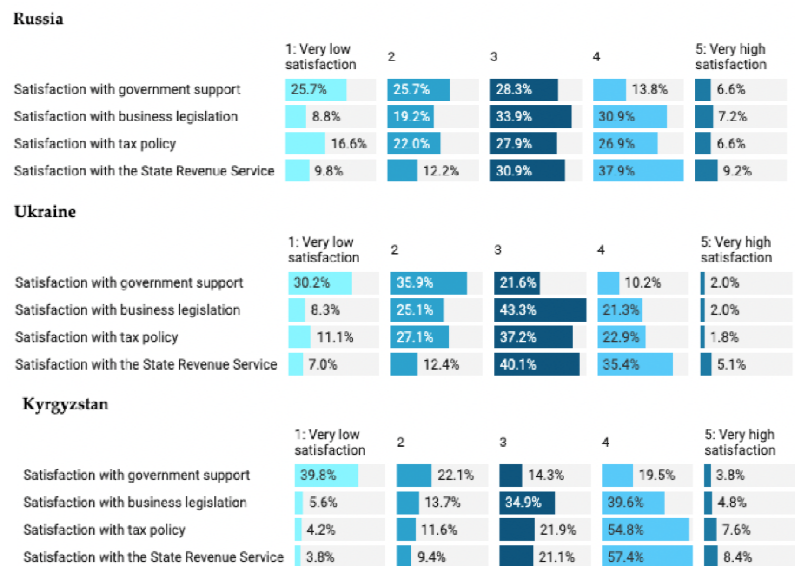


Figure 11. Satisfaction with the State Revenue Service, the government's tax policy, the quality of business legislation, and with government's support for entrepreneurs, 2018

Source: This table was made by the authors based on the analyzed collected data.