POPULATION IN THE SHADOW MARKET: PETTY CORRUPTION AND UNPAID TAXES

Gennady Vasilievich Osipov¹, Vladimir Ivanovich Glotov², Svetlana Gennadievna Karepova³

¹³Institute for Socio-Political Research, Russian Academy of Sciences, Russia
² Institute of Financial and Economic Security, National Research Nuclear University "MEPhI", Russia
E-mail: gos1pov@yandex.ru

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Abstract. The subject matter of the article is a problem that is relevant for developing economies. A legal foundation for economy operation development is consolidated slowly; instead, an illegal flow of money and corruption the population gets actively involved into are expanding. According to official records, the number of unaccounted employees who avoid taxation has exceeded 15 million in Russia. When studying this phenomenon, researchers mainly refer to shadow economy whose scale and financial damage inflicted on the country are known. Population masses involved in the illegal flow of money operate in the shadows, since the latency of corruption processes makes it difficult to explore this phenomenon and invokes sociological methods along with economic methods. The purpose of the article is to show the structure of Russian population’s involvement in the illegal cash flow turnover in terms of three aspects: presence in the shadow economy, involvement in corrupt practices, and concealment of a fraction of income aiming to non-payment of taxes. When solving these problems, the authors were to use the method of applied sociology with a subsequent transformation of aggregated information into empirical indicators by economic methods. Based on the research, the authors have explored the structure and motivation of the population to participate in the illegal flow of money, calculated the aggregate economic damage from all types of population incomes that are not undocumented by revenue authorities. By revealing the latent structure of the illegal cash flow, the research findings enable to more accurately plan priority directions of efforts to be made by fiscal bodies to neutralize the population participation in illegal economic and financial activities.

Keywords: corruption; shadow market; public services; bribe; public opinion


JEL Classifications: D84, G4, H24, H26

1. Introduction

The article considers the problem of corruption and illegal cash flow in relation to a Russian population using a single index, which is money out of fiscal accounting. It means the earnings of labor released from tax control. Under any conditions, this is a violation of criminal or administrative law. For integral analysis of population’s corruption forms, which manifests in relations with organizations rendering public services to the population and other service organizations, the article introduces the concept of ‘petty corruption’.
For the research, a hypothesis was formulated that the Russian population’s involvement in shadow economy is three-pronged: wide-scale illegal economic activity; tax evasion by being paid part of a salary in cash ‘under the counter’; and participation in corrupt payment practices when receiving services from public servants.

In the course of the research, the hypothesis was validated. The authors to use standardized (percentage) values in combination with absolute demographic data available from government statistics and applied the economic index method to calculate the overall volume of money unaccounted by the revenue authorities and circulating among individuals. This method also enabled the authors to categorize the illegal flow of money based on social and age population groups and by the types of their withdrawal ‘into the shadow economy’.

These calculations allowed the authors to determine an average value of the overall volume of potential fiscal charges that the state loses on an annual basis.

2. Literature review

The shadow economy problem has existed since the period of permanent spread of markets and fiscal system consolidation as the basis for state budget formation to strengthen the state’s defensive and social functions. However, in the 20th century, the shadow economy problem drew researchers’ attention with regard to a sharp increase in the capital circulating therein. In a number of cases, it became comparable to individual state budgets. In 1983, the first international conference on the shadow economy was held in Belefeld; in 1991, a conference of European statisticians on hidden and informal economy was held in Geneva (Dallago, 1994).

In May 1996, the problem of shadow economy scale estimation was considered, along with other issues, at a joint meeting on national accounting held by the United Nations Economic Commission for Europe (UNECE) (Eurostat) and the Organisation for Economic Co-operation and Development (OECD). Eurostat has also established a special working group on the hidden economy (Dibirdeev, 2015: 109).

In Russia, interest in the shadow economy problem came into sharp focus in the 1980s in the fields of science and economics (Shokhin, 1989).

In addition to these international events, to date, researchers have focused on the shadow economy as an economic activity that is unregistered legally and can damage official businesses in related industries, as well as a government’s budget in the form of unpaid taxes. According to this concept, the shadow economy includes: a) activities for the production, exchange, and use of goods and services prohibited by law; and b) activities for the production and exchange of goods and services permitted by law, but intentionally concealed to defraud revenues and avoiding remitting taxes and other mandatory payments under current regulatory enactments. The shadow economy involves creating a system of informal links between economic actors, often based on their personal relationships and direct contacts and supplementing the formal procedure for organizing economic ties (Yeliseeva & Burova, 2001; Kordík, Kurilovská, 2017; Luzgina, 2017).

Over the last several years, the shadow economy problem has increased in Russia. Moreover, in addition to the economic consequences, government officials and researchers have begun to raise the issue of the social consequences created by the population’s involvement in the shadow economy (RBC, 2010; 5-tv.ru, 2016).

In economic terms, studies analyzing the illegal flow of money can be divided into three groups: those exploring the causes and mechanisms of the shadow economy operation; those analyzing the structure and social causes of corruption; and those studying tax concealment tools. Entrepreneurial activity is a primary focus of all three
areas of research. In particular, the economic causes and consequences of the shadow economy expansion and its inhibitory influence on civil economy development have been studied (Matsievsky, 2015; Saunoris, 2018). A number of studies have dealt with the nature of shadow financial flows and the factors related to their formation in a modern economy (Slepov & Chekmarev, 2016), the formation of a shadow economic activity subculture (Pokida & Zybunovskaya, 2017; Akhmeduev, 2015), and the financial content of shadow capital (Tanyushcheva, 2015; Acosta-González et al., 2014).

A number of studies have analyzed the structure and of the shadow economy and its impact on an interstate scale in the European Union (Achim et al., 2018), in the Eurasian Economic Union (EAEU) member states (Krylov, 2017), and in the countries of Central and Eastern Europe (Bayar, 2016).

Corruption is another important topic of research. The major focus in these studies is on the social implications of public involvement in corruption (Abbink & Wu, 2017) and ways of combating corruption (Banerjee & Mitra, 2018; Rose-Ackerman & Lagunes, 2015).

In recent years, researchers have increasingly begun to investigate a population’s involvement in the shadow economy. This problem is especially urgent for countries with developing economies, and it primarily relates to the sphere of income tax non-payment on illegal (not registered legally) economic activity (Abdixhiku et al., 2018; Abdixhiku et al., 2017; Addison & Mueller, 2015). Studies on a population’s involvement in the shadow economy are especially urgent in Russia, including all types of tax evasion, such as shadow payroll (Boikov, 2014; Volovskaya et al., 2016). While it has been shown that tax evasion contributes to an increase in the scale of the shadow economy, the methodology for calculating the values has raised doubts about its validity, and, therefore, about the accuracy of the empirical values that are reported (Fedotov & Orlova, 2015; Kostín, 2014).

This article considers a different sphere of shadow monetary movement (petty corruption) concealed from fiscal accounting involving the general public, including both the employed population and pensioners. This entails officially unaccounted wages and taxes unpaid by individuals.

Petty corruption is a practice generated by the interactions between ordinary citizens and governmental officials. It includes various gifts and services rendered by citizens to an official and that official’s family members. Petty corruption covers the area of routine interactions between citizens and authorities (health, education, legal proceedings, various types of registration, military conscription, and personal security). It can manifest as provocation (Bezverkhov, 2016) and extortion of a bribe (Khilyuta, 2012).

3. Methods of assessment

To collect source information, methods of applied sociology were used to ‘probe’ the latent sphere of population’s economic activity unaccounted by the revenue authorities. Considering the illegal nature of the economic activity being investigated, the respondent interviews were anonymous, while the questions were asked straight. Respondents had the option to evade a direct answer, although not as a denial of the behavior revealed, but rather as a reference to ‘forgetfulness’. In addition, indirect assessment questions were used formulated so that they could subsequently project responses onto the respondent’s behavior. Some problems were also identified by applying correlation calculations and multidimensional factor analysis.

The initial sociological information was integrated into empirical measures though the economic method of multidimensional index analysis, which allowed for calculation of the values for Russia as a whole with a sufficiently high degree of confidence (estimated error is less than ± 10%).
The study was carried out by the Institute of Socio-Political Studies of the Russian Academy of Sciences with the participation of the authors in July-August 2016 for a multistage area-specific sample with first stage segmentation in the territorial-economic areas of the Russian Federation (in total 11 regions and 2 metropoles – Moscow and St. Petersburg), quota selection of respondents at the last stage, and personal interviews. In total, the sample includes 22 of the most typical Russian Federation (RF) entities with a coverage of 116 settlements, including 2 metropoles, 20 administrative centers of the Russian Federation entities, 36 district centers, 20 urban-type settlements and 38 villages. The sample size is 2200 people aged 18 and over representing all major social and age population groups.

4. Results and discussion

A) Petty corruption

The frequency index of ‘petty corruption’ – the share of employed population having paid a bribe at least once – cited by the Global Corruption Barometer (26%) seems to be reliable, since in a study conducted in August 2016 with the authors’ participation, the index was 27.4 %. However, according to the authors, the actual rate appears to be higher today if considering the 14.8% of respondents who answered a direct question about personal involvement in bribery (the survey question was formulated as follows: “Have you had to face a situation where you had to remunerate for a service with illicit cash?”) with ‘I do not remember’ as having paid a bribe at least once (maybe not even regarding it as such). Reckoning those ‘forgotten’ whether they had paid a bribe as those who had paid it (from their own account) was justified, among other reasons, by the fact that when answering a question about the average one-time bribe amount, the majority in this group of respondents were able to name its value. Therefore, the total number of those having paid bribes within a year should be taken as 42.2%, that is, 49 million people aged 18 years and over. It includes 13.9% (16.1 million people) within a year who have paid a bribe once, and 28.3% (32.9 million people) of those who have done it on several occasions (an average of 6 times). The average frequency of bribery for services is 3.2 times within a year.

In 2016, bribes were paid by 44.1% of men and 40.6% of women. This is referred to the overall population aged 18 years and over. According to Rosstat (2018: 71), referring to the indicators in absolute terms, they are 23.1 million (the number of men aged 18 and over is 52.4 million people and 25.9 million (the number of women aged 18 and over is 63.7 million people), respectively.

The respondents were asked euphemistically: ‘From your own practice or from the practice of your relatives, friends, and acquaintances, please list representatives of organizations you have to pay fees to for services with unofficial money, and what is the approximate amount of a one-time fee.’ The answers are quite complete. Taking into account the selected indicator, 42.2% of those who have bribed and the organizations (their representatives) who have accepted a bribe are arranged as follows (see Table 1).Table 1 (last row) shows that individuals (population) have paid 3 trillion 461 billion 236.4 million rubles of bribes to various organizations over the past year, or 54 billion 940.3 million USD. This is the minimum indicator based on the respondents’ own admission. The actual bribe amount is even higher. The above do not include ‘bureaucratic remuneration’ for grants and tenders or bribes of business organizations, whereby the flow of money concealed from the revenue authorities would increase dramatically.
The total bribe amount within a year, **USD million**

<table>
<thead>
<tr>
<th>Individuals and organizations</th>
<th>Share against the respondents who have paid a bribe, as %</th>
<th>Share against the population at large aged 18 and over, as %</th>
<th>Number of those having paid bribes, thousand people</th>
<th>One-time bribe amount, RUB</th>
<th>Total bribe amount, RUB million*</th>
<th>The total bribe amount within a year, <strong>USD million</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical officers</td>
<td>41.2</td>
<td>17.4</td>
<td>20,201.4</td>
<td>4,990</td>
<td>322,576.0</td>
<td>5,120.3</td>
</tr>
<tr>
<td>General administration for traffic safety</td>
<td>33.4</td>
<td>14.1</td>
<td>16,370.1</td>
<td>4,570</td>
<td>239,396.3</td>
<td>3,799.9</td>
</tr>
<tr>
<td>Education authorities</td>
<td>12.1</td>
<td>5.1</td>
<td>5,921.1</td>
<td>7,930</td>
<td>150,253.8</td>
<td>2,385.0</td>
</tr>
<tr>
<td>Police</td>
<td>8.8</td>
<td>3.7</td>
<td>4,295.7</td>
<td>10,170</td>
<td>139,799.3</td>
<td>2,219.0</td>
</tr>
<tr>
<td>Pre-school</td>
<td>7.6</td>
<td>3.2</td>
<td>3,715.2</td>
<td>11,960</td>
<td>142,188.1</td>
<td>2,257.0</td>
</tr>
<tr>
<td>Housing and communal services</td>
<td>7.3</td>
<td>3.1</td>
<td>3,599.1</td>
<td>5,030</td>
<td>57,931.1</td>
<td>919.5</td>
</tr>
<tr>
<td>Ministerial officers and other bureaucratic officials</td>
<td>5.0</td>
<td>2.1</td>
<td>2,438.1</td>
<td>48,400</td>
<td>377,612.9</td>
<td>5,993.9</td>
</tr>
<tr>
<td>Junior medical staff</td>
<td>3.2</td>
<td>1.4</td>
<td>1,625.4</td>
<td>1,680</td>
<td>8,738.2</td>
<td>138.7</td>
</tr>
<tr>
<td>Local authorities</td>
<td>3.2</td>
<td>1.4</td>
<td>1,625.4</td>
<td>226,920</td>
<td>1,180,274.5</td>
<td>18,734.5</td>
</tr>
<tr>
<td>Military registration and enlistment office</td>
<td>1.8</td>
<td>0.8</td>
<td>928.8</td>
<td>80,660</td>
<td>239,734.4</td>
<td>3,805.3</td>
</tr>
<tr>
<td>Court</td>
<td>1.3</td>
<td>0.5</td>
<td>580.5</td>
<td>157,680</td>
<td>292,906.4</td>
<td>4,649.3</td>
</tr>
<tr>
<td>Revenue service</td>
<td>1.2</td>
<td>0.5</td>
<td>580.5</td>
<td>16,160</td>
<td>30,018.8</td>
<td>476.5</td>
</tr>
<tr>
<td>Sanitary and epidemiological inspection service</td>
<td>1.2</td>
<td>0.5</td>
<td>580.5</td>
<td>21,720</td>
<td>40,347.1</td>
<td>640.4</td>
</tr>
<tr>
<td>Customs</td>
<td>1.2</td>
<td>0.5</td>
<td>580.5</td>
<td>24,930</td>
<td>46,310.0</td>
<td>735.1</td>
</tr>
<tr>
<td>Fire service</td>
<td>1.0</td>
<td>0.4</td>
<td>464.4</td>
<td>12,540</td>
<td>18,635.4</td>
<td>295.8</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>0.8</td>
<td>0.3</td>
<td>348.3</td>
<td>16,160</td>
<td>18,011.3</td>
<td>285.9</td>
</tr>
<tr>
<td>Notary office</td>
<td>0.7</td>
<td>0.3</td>
<td>348.3</td>
<td>5,760</td>
<td>6,419.9</td>
<td>101.9</td>
</tr>
<tr>
<td>Pension fund</td>
<td>0.7</td>
<td>0.3</td>
<td>348.3</td>
<td>10,930</td>
<td>12,182.1</td>
<td>193.4</td>
</tr>
<tr>
<td>Federal service for supervision of consumer rights protection and human well-being</td>
<td>0.7</td>
<td>0.3</td>
<td>348.3</td>
<td>21,720</td>
<td>24,208.2</td>
<td>384.3</td>
</tr>
<tr>
<td>Employment fund</td>
<td>0.6</td>
<td>0.3</td>
<td>348.3</td>
<td>3,020</td>
<td>3,366.0</td>
<td>53.4</td>
</tr>
<tr>
<td>Child protection services</td>
<td>0.3</td>
<td>0.1</td>
<td>116.1</td>
<td>23,930</td>
<td>8,890.5</td>
<td>141.1</td>
</tr>
<tr>
<td>Disability review board</td>
<td>0.3</td>
<td>0.1</td>
<td>116.1</td>
<td>25,600</td>
<td>9,510.9</td>
<td>151.0</td>
</tr>
<tr>
<td>Prosecutor’s office</td>
<td>0.2</td>
<td>0.1</td>
<td>116.1</td>
<td>206,690</td>
<td>76,789.5</td>
<td>1,218.9</td>
</tr>
<tr>
<td>Bailiffs</td>
<td>0.2</td>
<td>0.1</td>
<td>116.1</td>
<td>31,600</td>
<td>11,740.0</td>
<td>186.3</td>
</tr>
<tr>
<td>Other bribe types</td>
<td>0.5</td>
<td>0.2</td>
<td>232.2</td>
<td>4,570</td>
<td>3,395.7</td>
<td>53.9</td>
</tr>
<tr>
<td>'Kickbacks' for granting project or work contracts</td>
<td>0.8</td>
<td>0.3</td>
<td>348.3</td>
<td>On average, 17.4% of the total cost of project of grant works</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Note: *When calculating the total bribe amount, the correction factor k = 3.2 was used, that is, the average frequency of bribery over the past year.

**on the average the exchange rate of 2015 and the first half of 2016: $ 1 = 63 RUB**

| Total                        | 3,461,236.4etrepreneurship and sustainability issues | 54,940.3 |
To determine the share of each organization in the total annual aggregate bribe amount, they should be grouped according to the following principle: 1) health care (doctors, junior medical staff); 2) police, including general administration for traffic safety; 3) education authorities, including preschool education; 4) housing and communal services; 5) executive and legislative government bodies (ministerial officers and other bureaucratic officials, local authorities); 6) military registration and enlistment office; 7) judicial and legal authorities (courts, prosecutor's offices, bailiffs); 8) community relations and service bodies (tax service, Sanepidemnadzor (sanitary and epidemiological inspection service), customs, fire service, insurance companies, notary office, pension fund, Rospotrebnadzor (the federal service for supervision of consumer rights protection and human well-being), employment fund, child protection services, disability review board).

The share of bureaucratic services in the total annual bribe amount is almost half – 45%, or 24 billion 728.4 million USD in monetary terms (Figures 1 and 2).

These services are followed by representatives of judicial, legal, law enforcement and health authorities, 31.5% together, or 17 billion 332.4 million USD in monetary terms.

Education, tax surveillance and public services, military registration and enlistment office are at the third place with 21.7% in aggregate, or 11 billion 906.1 million USD.

Housing and communal services is the last with 1.8% and 973.4 million USD.

![Figure 1. Share of different organizations in the total bribe amount paid by the population within a year, as %](image)
The average amount of a one-time bribe reported by various demographic and social groups indicates a significant variation among the organizations whose representatives have taken bribes. The bribe amount varies according to the complexity of a problem to be solved whereby citizens appeal to different organizations. Both men and women incur the highest unofficial expenses when attending courts, prosecutor’s offices, and local authorities. This conclusion applies to different age groups. Citizens start to encounter problems with local authorities mainly at the age of 25 and older, whereas problems with the military registration and enlistment office start at the age of 18-20.

Those who have the most unofficial relations with courts, prosecutor’s offices, and local government officials are mainly company employees; those who are informed of the amount of bribes to these authorities are also law enforcement officers and pensioners, that is, former officers. Bribes in military registration and enlistment offices affect representatives of all social groups, but it appears that the bribe amount varies according to the nature of the problem to be solved.

Bribes in child protection service are high but one-time and, most likely, are related either to adoption or to obtaining a housing sale permit. Similarly, bribes paid to Sanepidemnadzor and to the disability review board are also one-time.

For metropolises, large amounts of bribes are not typical at the population level, although they occur in all organizations. On a larger scale and with larger amounts, bribes are common in regional cities, towns and villages.

B) Officially unaccounted wages and unpaid individual taxes

The problem of the population to find auxiliary income sources is connected in many respects with the difficulty to repay debt service obligations on bank loans. This conclusion reliability is confirmed by results of the survey conducted by the authors.
The survey findings show that the average amount of a bank indebtness of 26.1% (30.3 million) people aged 18 and over per debtor is 378,530 RUB on average, or 11 trillion 469.5 billion RUB as the total amount of all debtors, which is equivalent to 182.1 billion USD. The average amount of private debts of 10.9% (12.7 million) people aged 18 and over per debtor is 46,580 RUB on average, or 591.6 billion RUB as the total amount of all debtors, which is equivalent to 9.4 billion USD. Thus, the total (apparently minimal) amount of the population’s debt is 12 trillion 61.1 billion RUB, or 191.4 billion USD.

The probability that debts can be paid in due time is estimated by the respondents at 90%. According to them, it will take them an average of 2 years 9 months.
The debt bulk falls on the shoulders of young and middle-aged generation aged 25-50 (Fig.3), mainly in metropolises (Fig.4).

The population’s demand for operational ‘consumer’ loans that are nominally small have generated new forms of lending organizations (semi-financial–semi-rentier) – microfinancing lending institutions. A microlending institution is a swiftly operating financial institution of rentier type that is not quite convenient for people over a high interest it charges. However, a small lending amount gives the appearance of small losses when the interest is ‘projected’ onto a small denomination. According to the research, microfinancing institutions are not popular
with the general public. In general, 10.6% (8.7% in 2015, 10% in 2013) of the population aged 18 and over, that is, 12.3 million people use the services of microfinancing institutions. The largest share of those applying for a loan to microfinancing institutions falls on the representatives of 21-50 age group (Fig.5).

The main reasons why people resort to microfinancing institutions are the following two: the rapidness of a loan provision for 65.1% (70.7% in 2015, 58.6% in 2013) and ready availability of loans for 64.7% (65.7% in 2015, 53.5% in 2013) (Fig. 6 and 7).

**Figure 5.** Share of different age group representatives applying for a loan to a microfinancing institution in 2016, as %

**Figure 6.** Application of different age group representatives for a loan to microfinancing institutions due to ready availability of loans in 2016, as %
Debt bondage encourages entities and individuals to search for any funds to settle outstanding debts. Hence, another type of infringement on the budget interest is born – tax avoidance through payment of salaries with unaccounted cash. 32.8% of the interviewees indicated this practice at enterprises and institutions. In their opinion, the share of ‘envelope’ salary averages 44.7% (almost half of a salary). Envelope salary or, as it is often referred to, ‘black’ or ‘gray’ salary is a payroll whereby an entrepreneur does not pay payroll taxes to the government. The lower the actual wages of an employee are, the less money the government will receive. In 2010, the Government advanced the struggle against hidden wages and entrusted ‘gray salary’ legalization commissions affiliated to the revenue services with supervising artificial reduction of wages by entrepreneurs. Envelope salary is an offense punishable by the law. In case the fact of salary payment in addition to the official pay slip is ascertained, the infringing entrepreneur is subject to administrative or criminal penalty. The employee in this case can also answer in law if they were aware about the ‘gray salary’ and agreed with this situation, and there is evidence to support this fact.

With regard to persistence of salary payment in the form of monetary allowances not accounted by the revenue authorities, this is largely conditioned by the fact that according to Article 5.27 of the Code of Administrative Offenses of the Russian Federation ‘Violation of labor and labor protection legislation’, such violation entails imposition of an administrative fine on executive officers at the amount of one to five thousand rubles; on persons engaged in entrepreneurial activities without forming a legal entity – from one to five thousand rubles or administrative suspension of operations for up to ninety days; on legal entities – from thirty to fifty thousand rubles or administrative suspension of operations for up to ninety days. This is not an onerous punishment for entrepreneurs and individuals. The gain from avoiding taxation is much higher than the loss from punishment (Urist-edu.ru, 2013)

Based on the research, it is possible to estimate the approximate amount of budget losses. It is legitimate to assume that unaccounted official salary is allocated from the cash amount; therefore, it is legitimate to assume a loss of VAT that is 15% of the total cashed amount. Another budget loss of revenue is a unified social tax of 30.2% and an income tax of 13%. The amount lost by the budget is determined by the equation:

$$W = S1 + S2 + S3$$

where:

S is a basic amount of payroll calculation.
According to Rosstat (the Federal State Statistics Service), the average salary in Russia was 36.2 thousand RUB in 2016; the number of economically active (employed) population, exclusive of the unemployed, was 7.1 million people.

Taking these data into account, the total monthly payroll value, including income tax (13%), is 257 billion 20 million RUB; 334 billion 126 million RUB including the unified social tax, and 393 billion 089.4 million RUB including VAT.

The calculated values are as follows:

\[ S = 393 \text{ billion } 089.4 \text{ million RUB.} \]
\[ S1 = 58 \text{ billion } 963.4 \text{ million RUB.} \]
\[ S2 = 77 \text{ billion } 106 \text{ million RUB.} \]
\[ S3 = 33 \text{ billion } 412.6 \text{ million RUB.} \]

The total tax amount is: \[ W = S1 + S2 + S3 = 58963.4 + 77106 + 33412.6 = 169 \text{ billion } 482 \text{ million RUB.} \]

32.8% of the respondents admitted that they received envelope salaries not registered officially; they account for 55 billion 496.8 million RUB out of these taxes.

With the envelope salary index taken as 44.7%, which was used as the basis by the respondents, the tax loss makes: \[ \delta = 55990.1 \times 44.7/100 = 24 \text{ billion } 848.8 \text{ million RUB per month or } 298 \text{ billion } 185.6 \text{ million RUB per year, which is equivalent to } 4 \text{ billion } 733.1 \text{ million USD.} \]

In addition to unaccounted official salaries, according to 14.4% of the respondents, the population manages to save an average of 31.5% of obligatory taxes over a year. In this case, the amount of budget losses can be calculated only highly approximately. According to the research findings, the average monthly income per family member is 17,415 RUB. The average Russian family structure is 3 people, whereby the average monthly family income is 52,245 RUB, and 626,940 rubles on average over a year.

The number of Russian households is about 2.4 million. The number of families that save on taxes is 345,600 and their total annual budget is 216 billion 670.5 million RUB. Suppose that the amount of 13% income tax is saved, which makes 28 billion 167.2 million RUB. 44.7% of this amount is concealed, that is, 12 billion 590.7 million RUB, or 199.9 million USD.

Now, the shadow flow of money circulating among the population (including in relations with organizations and institutions) within a year can be calculated as follows:

\[ Q = \text{bribes} + \text{taxes from unaccounted salaries} + \text{personal income taxes saved by the population} = 54 \text{ billion } 940.3 \text{ USD } + 4 \text{ billion } 733.1 \text{ million USD } + 199.9 \text{ million USD } = 59 \text{ billion } 873.3 \text{ million, or } 3 \text{ trillion } 772 \text{ billion } 17.9 \text{ million RUB.} \]

This is the minimum value and it refers only to the employed population of the Russian Federation aged 18 and over. It does not take into account ‘kickbacks’ in tenders and grants, the relationship of large and medium-sized businesses with organizations and institutions, a criminal flow of money (drugs, undocumented alcohol, other counterfeit products, smuggling, etc.).
Persistence of the indicators these calculations are based on is evidenced by the degree of the respondents’ competence that, as reflected by the survey data, should be considered quite high, since 70% of those who indicated the amount of a one-time bribe paid it themselves by their own admission, and only 30%, apparently, primarily law enforcement officials, based their assessments on the accounts of relatives or acquaintances who had had such experience. To illustrate the respondents’ competence level criterion when estimating the amount of a one-time bribe, the authors give a description of the respondents who answered the bribe amount question (Table 2).

Table 2. The share of respondents who estimated the amount of remuneration for services with illicit cash, as %

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Personal involvement of respondents in payment for the service with illicit cash</th>
<th>Including</th>
<th>Total number of those having paid bribes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Have paid a bribe once or more, including those who ‘do not remember it’</td>
<td>Have not been personally involved in bribery but heard about its amount from relatives or acquaintances</td>
<td></td>
</tr>
<tr>
<td>General administration for traffic safety</td>
<td>42.6</td>
<td>17.9</td>
<td>24.7</td>
</tr>
<tr>
<td>Police</td>
<td>9.4</td>
<td>3.5</td>
<td>5.9</td>
</tr>
<tr>
<td>Court</td>
<td>2.6</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Prosecutor’s office</td>
<td>1.4</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Bailiffs</td>
<td>1.4</td>
<td>0.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Fire service</td>
<td>3.1</td>
<td>0.9</td>
<td>2.2</td>
</tr>
<tr>
<td>Customs</td>
<td>1.5</td>
<td>0.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Military enlistment and registration office</td>
<td>7.5</td>
<td>4.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Notary office</td>
<td>1.7</td>
<td>0.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Housing and communal services</td>
<td>7.3</td>
<td>2.0</td>
<td>5.3</td>
</tr>
<tr>
<td>Local authorities</td>
<td>3.1</td>
<td>1.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Child protection services</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Pension fund</td>
<td>0.6</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Employment fund</td>
<td>0.8</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Revenue service</td>
<td>2.0</td>
<td>0.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Sanitary and epidemiological inspection service</td>
<td>4.5</td>
<td>1.4</td>
<td>3.1</td>
</tr>
<tr>
<td>School</td>
<td>13.6</td>
<td>5.0</td>
<td>8.6</td>
</tr>
<tr>
<td>University</td>
<td>9.4</td>
<td>3.8</td>
<td>5.6</td>
</tr>
<tr>
<td>School, lyceum</td>
<td>3.4</td>
<td>1.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Pre-school</td>
<td>14.1</td>
<td>6.1</td>
<td>8</td>
</tr>
<tr>
<td>Medical officials</td>
<td>38.4</td>
<td>10.2</td>
<td>28.2</td>
</tr>
<tr>
<td>Junior medical staff</td>
<td>20.8</td>
<td>4.5</td>
<td>16.3</td>
</tr>
<tr>
<td>Disability review board</td>
<td>4.6</td>
<td>1.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Ministerial officers and other bureaucratic officials</td>
<td>1.9</td>
<td>0.3</td>
<td>1.6</td>
</tr>
<tr>
<td>‘Kickbacks’ for granting project or work contracts</td>
<td>7.3</td>
<td>2.2</td>
<td>5.1</td>
</tr>
<tr>
<td>Other types of unofficial payment</td>
<td>2.0</td>
<td>0.2</td>
<td>1.8</td>
</tr>
<tr>
<td>The share of respondents</td>
<td>73.8</td>
<td>28.2</td>
<td>45.6</td>
</tr>
</tbody>
</table>

The share of envelope (off the books) salaries equally affects all demographic and social group representatives. Thus, male respondents indicated that the envelope salary is approximately 44.2% of the total payroll. For female respondents, this indicator is 45.2%.
Different age group representatives pointed to the following ‘unaccounted’ shares in the composition of their salaries (Fig.8).

Unaccounted salaries occur in settlements of all types. The rate is highest in district centers and rural areas (Fig.9).

The unaccounted salary share is highest in material production and service industry, including financial and insurance companies; it affects urban employed pensioners to a large extent (see Fig.10).
The situation is similar in terms of the respondents’ estimation of approximate amount of excess profit taxes not paid by the population within a year, which is 31.5%, according to the respondents. According to male respondents, this figure averages 30.5%, while female respondents estimate it as 32.6%.

The opinions of different age group representatives on this issue do not vary enormously (Fig.11).

The population fails to pay excess profit taxes on the auxiliary income within a year in settlements of all types and approximately in equal shares, except for urban-type settlements, where this figure is twice as low as its average value (see Fig.12).
Concealment of taxes is least typical of law enforcement officials and most typical in finance, insurance, trade and other service sectors, as well as in management (see Fig. 13).

For non-payment of taxes by individuals in Russia, a fine of 5% of the amount of tax payable is imposed from the day established for filing an income tax, which is not a grave punishment for an individual (Law03.ru, 2018). As a result, the loss of revenue by the state budget is enormous.

Figure 12. Opinion of the residents of different settlement types on what share is the unpaid tax amount, as %

Figure 13. Opinion of different social group representatives on what share is the unpaid tax amount, as %
Conclusions

1. In public opinion, corruption is most often associated with relations between business and government supervisory bodies, but the survey findings indicate that remuneration for public services that representatives of different organizations are most often supposed to provide free of charge are encumbered with ‘cash grabs’. This encumbrance can be notionally named ‘petty corruption’, which, however, is not harmless in moral terms, given that it reaches a total of 60 billion USD a year.

2. Regrettably, those who are primarily involved in the extensive ‘petty corruption’ network are government organizations meant to consolidate the state and the population supported by social security insurance. These organizations are funded by taxpayers to be able operate; however, they subject them to an additional ‘toll’.

3. One of the main reasons for ‘petty corruption’ is a weak competition environment and, in share terms, underrepresentation of private companies in many public service sectors where the state monopoly (in particular, in education, health care, and housing services) has remained intact.

4. To solve the ‘petty corruption’ problem, extensive educational measures aimed at the population and general public legal consciousness formation are suitable, but the key role therein can be only played by widespread private sector development in the industries involved in public service but so far standing as state monopolies.

5. The problem of enterprises and institutions (especially in the service sector) paying a portion of salaries to their employees illegally is a consequence of a severe economic crisis and the desire of business participants to attenuate their financial expenses by saving on social taxes and reducing the legalized payroll budget amounts. At the same time, the income tax amount is unlikely to be saved, since this share (13%) is most probably spent as a ‘fee’ for cashing in; however, it is criminally punishable and therefore also makes up the state budget costs.

6. In the context of market development and immaturity of public economic consciousness, most people fall into a position of dependence on credit institutions and rentiers, being unable to assess risks and propelled into debt bondage. This population segment is quite large and is in the debt bondage of credit institutions and rentiers for an average of 3 years.

7. Debt commitments encourage a segment of the population to intensify their labor, while another segment is urged to unreported self-employment, which brings them additional income. However, at least a third of the able-bodied population tries to conceal these income taxes, which is unambiguously a loss of revenue to the state budget.

8. The problem of illegal salaries and non-payment of taxes based on self-employment of individuals can be solved only by introducing tax incentives.
References


Matsievsky, N.S. 2015. Shadow Russia: origins, essence, causes, consequences. Tomsk: Published by "Krasnoe Znamya".


Shokhin, A.N. 1989. Social problems of perestroika. Moscow: Published by "Ekonomika".


Gennady Vasilievich OSIPOV is the Academician of the Russian Academy of Sciences, Doctor of Philosophy, Professor, Chief Researcher of the Institute for Social and Political Studies of the Russian Academy of Sciences, Moscow, Russia. Activity: Coordination of research in the socioeconomic policy of the state. Scientific specialty: Finance as a social institution for regulating distributional relations. ORCID ID: orcid.org/0000-0003-1329-9294

Vladimir Ivanovich GLOTOV is the Candidate of Sciences (Economics), Professor, Director of the Institute of Financial and Economic Security of the National Research Nuclear University "MEPhI", Deputy Director of the Federal Service for Financial Monitoring, Moscow, Russia. Activity: Organization of control over illegal financial flows. Scientific specialty: Population's behavior in the financial services market. ORCID ID: orcid.org/0000-0003-1752-2561

Svetlana Gennadievna KAREPOVA is the Candidate of Sciences (Economics), Leading Researcher, Head of the Operational Research Department, Institute for Social and Political Studies of the Russian Academy of Sciences, Moscow, Russia. Activity: Empirical study management of financial flows in the economic relations. Scientific specialty: Formation of integral empirical indicators of monetary movement in the employment relations. ORCID ID: orcid.org/0000-0002-0472-0924