

# Factors of Spatial Differentiation of Non-Observed Economy: Regional Aspect

O. A. Tsepelev

line Amur State University,  
Blagoveschensk, Russia  
tsepelev\_o@mail.ru

V. V. Bobrova

Orenburg State University,  
Orenburg, Russia  
bobrova1971@mail.ru

**Abstract**—The article typifies factors influencing the spatial differentiation of the non-observed economy and provides grounds for grouping them together. The author also details the specific features of the factors' occurrence in the constituent regions of Russia. The grouping approach is special due to the degree of aggregation applied, while the combination of the features being analyzed depends on the study objectives, the mapping of problem areas (elements) and the subject of research.

The first group is made up of economic factors (spatial and sectoral structure of the economy; taxation (tax burden), population well-being; and available investment resources). The group of institutional factors includes corruption, administrative barriers, the stability of the legal and regulatory framework. The group of social factors encompasses population's expectations, established stereotypes etc.

The most important economic factor that is considered in the article is the economic well-being of the population in Russia's regions. By comparing data for all constituent regions of Russia, the authors have established an inverse correlation between per-capita income and the number of people employed in the informal sector. There is a stronger tendency towards non-observed economic activities in poorer regions and vice versa.

The authors also draw a conclusion that cause-effect relationships in the spatial differentiation of the non-observed economy are rarely manifested vividly, and that factors pertaining to the occurrence and spread of this phenomenon vary by region and change over time. This makes the described factors of the spatial differentiation of the non-observed economy region-specific, too.

**Keywords**— *Non-observed economy, informal sector, region, factors, spatial differentiation, specific.*

The study was conducted with financial support provided by the Russian Foundation for Basic Research as part of research project No 18-010-00792.

## I. INTRODUCTION

In order to be able to make effective economic decisions both at a national and a local level, one needs full and accurate information about current social and economic processes. There are however certain economic activities that are not captured by official statistics for one reason or another, evade taxes and are not included in GDP. We define this sector as "non-observed economy" (henceforth NOE) [1].

By Western estimates, the average size of the non-observed economy in developed countries is around of 12% of

GDP; in transition economies around 23% of GDP and around 40% of GDP in developing economies.

In the case of Russia, the estimates vary greatly in magnitude. According to Russia's Federal State Statistics Service (Rosstat), the share of the non-observed economy in GDP in 2016 was 14.8% [3]. The World Bank estimates it at 40 to 50% [4]. There is a whole range of territorial and industry-specific factors that foster the growth of the non-observed sector and while being its product.

Consequently, this article aims to present a classification of factors of different nature that influence the formation and distribution of the non-observed economic activity and to explain their regional peculiarities.

## II. BACKGROUND

The non-observed economy has a worldwide distribution. Current research in the field is dominated by works by Schneider, F. [5], Buehn, A. [6], Elgin, C. and Oztunali, O. [7], Neuwirth, R. [8], Jutting, J. and De Laiglesia, J. R. [9]. Significant contributions have been made by Russian scholars N. Bokun, I. Kulibaba [10], V. Burov [11], Yu. Latov [12], R. Suslina [13]. One could agree with many researchers who argue that the causality in the distribution of the non-observed economy is rarely obvious and that factors pertaining to the occurrence and spread of the phenomenon differ by region and vary in time.

The authors have grouped and typified the main factors that manifest themselves in different ways in different regions and industries.

1. Economic factors (spatial and industrial structure of the economy, taxation (tax burden), and financial wellbeing in population).

2. Institutional environment (robustness of legal institutions, administrative regulation, corruption).

3. Social factors (expectations, established stereotypes; "anti-government phobia", a tandem of business and government).

A specific feature of this grouping approach is the degree of aggregation. The combination of the causes being analyzed depends on the objectives of the study, the borders of the problem domains (elements) and the subject of the study.

Experimental research results

**Economic factors of non-observed economy**

The main group of quantifiable factors are economic factors that are the focus of this study.

Spatial and industrial structure of economy. Most of statistical bodies, including Rosstat, agree that the size of the non-observed economy differs by industry. Table 1 presents adjustments to gross value added across the sectors of the Russian economy incorporating the non-observed economy in 2014-16.

Table 1. Gross added value adjustments for NOE in gross value added by sector in Russia (% of gross added value by sector). Based on Rosstat data. Authors' own calculations [14].

	Industry	2014	2015	2016
1	Agriculture, hunting, forestry	50.2	46.1	43.9
2	Fishing, fish farming	21.7	17.7	17.7
3	Mining	0.6	0.6	0.8
4	Processing industries	7.8	4.8	6.1
5	Construction	15.5	17.7	16.5
6	Wholesale trade and retailing, car and motorcycle repair and maintenance services, household appliance repair	11.5	8.0	9.2
7	Hotels and restaurants	10.7	16.9	16.5
8	Transport and communication	6.9	4.6	5.2
9	Finance	1.1	1.3	1.2
10	Real estate and rental and leasing	46.8	45.1	43.5
11	Education	5.0	6.5	5.4
12	Health care and social services	2.8	2.6	2.5
13	Utilities, other social and personal services	12.9	12.4	12.3
14	Total gross added value in basic prices	16,0	14,8	14,8

As shown in Table 1, informal economic activities were most common in Russia in such primary sector industries as agriculture, fishing and construction, as well as in services such as real estate, hotels and restaurants, utilities, wholesale trade and retailing. Consequently, the established industrial structure of a region's economy is a factor in the spatial differentiation of the non-observed economy.

Taxation (tax burden). All too often, a heavy tax burden and the instability and complexity of the tax system force businesses to operate in the underground economy [15]. Taxes

and social security contributions increase labor costs in the formal economy. Additionally, revenue from some taxes is transferred completely into regional purses, while revenue from other taxes is split between the federal government and local government in a certain proportion [16]. Consequently, the system of taxes that exists in Russia today could create conditions for the development of the non-observed economy in various regions.

Financial wellbeing in population. The authors believe that income differentiation in regions leads to even greater territorial differential in the size of the shadow economy because people opt to work in the informal sector [17].

There is, however, an inverse correlation between the per capita income and the share of workers employed in the informal sector in the regions of Russia (see Fig. 1).

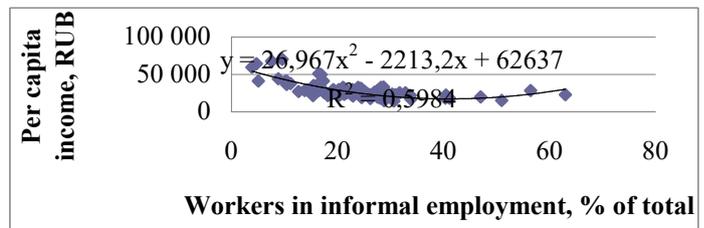


Fig. 1. The share of workers in informal employment and per capita income in the regions of Russia in 2016. Based on Rosstat data; authors' own calculations [18].

As indicated by Figure 1, only a small share of workers are employed in the informal sector in the economically developed regions of Russia where personal incomes are high, but the informal employment is high in relatively poor regions.

**Institutional and social factors of non-observed economy**

Along with economic processes, Russia went through a radical transformation of its institutional environment. Democratic reforms that were sometimes spontaneous triggered the emergence of new institutions in the regions of Russia that were not typical of Soviet Russia [19]. The new structures needed to refine their work processes; the legal framework was given an overhaul. That was accompanied by a surge of corruption.

Social interaction was changing, too. People who are engaged in business activities try to avoid contacts with government institutions [20]. Business merged with government, and government agencies, especially in economically depressed and subsidized regions were short of funds, which spurred the growth of the non-observed economy.

**III. CONCLUSIONS**

The non-observed economy is unevenly distributed across Russia. The authors believe that this is due to regional variations in industry composition, which is also a key factor determining considerable income inequality.

The authors have presented a classification of factors influencing the spatial differentiation of the non-observed

economy across the regions of Russia. Placing the emphasis on economic factors, they also note that the development of new previously unseen institutional relations in various regions of Russia led to a growth in the share of non-observed operations.

The study also concludes that social factors that have different degrees of manifestation in different regions also contributed significantly to the vast spread of the non-observed economic activity. The groups of factors of the spatial differentiation of the NOE that have been identified by the authors are region specific.

## References

- [1] Guidelines for Measuring the Non-Observed Economy [in Rus]. Moscow, (2003).
- [2] Schneider, F. Shadow Economies and Corruption All Over the World: What Do We Really Know? *Economics: The Open-Access, Open-Assessment E-Journal*, Vol. 1, Issue 5, p 66 (2007).
- [3] Surinov, A. Nenabludaemaia ekonomika: popytka kolichestvennykh izmerenii [Non-Observed Economy: An Attempt at Quantitative Measurements]. *Finstatinform*, Moscow (2003).
- [4] Schneider, F., Buehn, A. and Montenegro, C.E. Shadow Economies All Over the World: New Estimates for 162 Countries from 1999 to 2007, [http://www.gfintegrity.org/storage/gfip/documents/reports/world\\_bank\\_shadow\\_economies\\_all\\_over\\_the\\_world.pdf](http://www.gfintegrity.org/storage/gfip/documents/reports/world_bank_shadow_economies_all_over_the_world.pdf) (2010), last accessed 2018/05/21
- [5] Schneider, F. The Influence of Public Institutions on the Shadow Economy: An Empirical Investigation for OECD Countries. *European Journal of Law and Economics*, 6/3, pp.441-468 (2010).
- [6] Schneider, F., Buehn, A. Shadow Economy: Estimation Methods, Problems, Results and Open questions. *Open Economics*, pp. 1-29 (2017).
- [7] Elgin, C. and Oztunali, O., Shadow Economies Around the World: Model Based Estimates, working papers. Bogazici University, Department of Economics, Istanbul (2012).
- [8] Neuwirth, R., The Shadow Superpower, *Foreign Policy*, <http://foreignpolicy.com/2011/10/28/the-shadow-superpower/> (2011), last accessed 2018/05/14
- [9] Jutting, J. and De Laiglesia, J. R. Is Informal Normal? Towards More and Better Jobs in Developing Countries, OECD Development Centre, Paris [www.materialien.org/planet/occdinformellersektor.pdf](http://www.materialien.org/planet/occdinformellersektor.pdf), (2009), last accessed 2018/05/10
- [10] Bokun, N., Kulibaba, I. Tenevaya ekonomika: ponyatie, klassifikatsii, informatsionnoe obespechenie [Shadow Economy: The notion, classifications, information support]. *Voprosy Statistiki*, No 7, p 4 (1997).
- [11] Burov, V., Burova, L., Gonin, V. Uklonenie ot uplaty nalogov kak faktor snizheniia ekonomicheskoi bezopasnosti malogo predprinimatel'stva [Tax evasion as a factor of deteriorating economic security of small businesses]. *Baikal State University, Chita* (2014).
- [12] Latov, Iu., Artem'ev, N. Institutsional'no-ekonomicheskie prichiny «Tenevizatsii» malogo biznesa Rossii (Institutional and economic circumstances squeezing small business out of Russia's formal economy). *Terra Economicus*, Vol. 13 No 1, pp 61-72 (2015).
- [13] Suslina, A., Leukhin, R. Bor'ba s tenevoi ekonomikoi v Rossii: chastnye aspekty obshchikh problem (Shadow Economy Fight in Russia: Some Aspects of Common Problems). *Finansovyi zhurnal (Financial Journal)*, No 6, pp. 46-61 (2016).
- [14] Rosstat. Adjustment of gross value added in Russia for economic operations that are not observed with direct statistical methods. Available at: [www.gks.ru/free\\_doc/new\\_site/vvp/vvp-god/tab14-19-1.xls](http://www.gks.ru/free_doc/new_site/vvp/vvp-god/tab14-19-1.xls), last accessed 2018/05/05.
- [15] Tsepelev, O.A., Kolesnikova, O.S. Otsenka vliianiia tenevoi ekonomiki na velichinu nalogovykh dokhodov biudzheta: regional'nyi aspekt (Assessment of the impact of shadow economy on the amount of tax revenue: A regional perspective). *Regional'naia ekonomika: teoriia i praktika (Regional Economics: Theory and Practice)*, Vol. 15, No 5 (440), pp. 832-844 (2017).
- [16] Tsepelev, O., Kakaulina M. Modeling the Impact of Taxes on Economic Growth with Regional Resource Potential. *American Journal of Applied Sciences* 12(5), c. 345-354 (2015).
- [17] Tsepelev, O.A., Kolesnikova, O.S. Uroven' dokhodov naseleniia kak faktor formirovaniia tenevoi zaniatosti: regional'nyi aspekt [People's income as a factor of the shadow economy: A regional perspective]. *Uroven' zhizni naseleniia regionov Rossii [Living Standards in the regions of Russia]*, No 2 (204), pp. 163-168 (2017).
- [18] Rosstat. Workforce, employment and unemployment in Russia. Available at: [http://www.gks.ru/bgd/regl/b16\\_61/Main.htm](http://www.gks.ru/bgd/regl/b16_61/Main.htm) (2016), last accessed 2018/05/05.
- [19] Tsepelev O., Serikov S. Peculiarities of regional development and industrial specialization of the far east of Russia. *Journal of Applied Economic Sciences*. T. 12, № 5 (51), C. 1422-1432 (2017).
- [20] Tsepelev, O.A., Serikov, S.G. Procedure for regional investment potential assessment by institutional sectors of economy. *Indian Journal of Science and Technology*, Vol. 9, No 14, p. 91523 (2016).