

DOI: 10.26794/2587-5671-2025-29-2-47-58

UDC 338(045)

JEL A1, Q1, R1

Improvement of Methods for Assessing the Shadow Economy in Agricultural Enterprises for the Purpose of Preventing Threats to Food Security

V.I. Avdiyskiy

Financial University, Moscow, Russia

ABSTRACT

The **subject** of the research is methods for assessing the shadow economy in the field of agricultural production. The **purpose** of the study is to propose methods for identifying the shadow economy in agricultural enterprises, which negatively affects economic growth and the balanced development of regions and the country as a whole. The **objectives** of the study were scientific and methodological substantiation of indirect methods for assessing the indicators of the shadow economy in agricultural enterprises; an objective assessment of possible financial losses from unaccounted-for activities; and development of methods for a comprehensive assessment of the shadow economy in the field of agricultural production to timely identify and address the causes and conditions that have a destabilizing effect on the country's food security. The study used an analytical method to identify cause-and-effect relationships between the studied process of unaccounted-for agricultural production, financial losses and threats to food security. It is **concluded** that in order to effectively combat the shadow economy in the agricultural sector, it is necessary to improve methods for assessing the level of informal production, which will not only objectively determine the actual state of affairs, but also develop effective measures to eliminate the causes and conditions conducive to the organization of this illegal activity. The **scientific novelty** of the study is the identification of imbalances between the indicators of financial and economic activity of agricultural enterprises, which indicate signs of unaccounted-for agricultural production. The author proposes to carry out a comprehensive analysis of all indicators of the results of financial and economic activities in this field of production, which allows us to calculate the actual volumes of products produced. It is also proposed to develop special government programs aimed at identifying threats and minimizing the risks of ensuring the stable functioning of agricultural enterprises through the introduction of modern accounting and control technologies. The article offers a comparative analysis of the results of financial and economic activities of the main stages of production and processing of agricultural products, which will reveal the facts of shadow production, calculate the amount of financial losses and promptly eliminate the causes and conditions conducive to shadow production in the agricultural sector.

Keywords: economic security; agro-industrial complex; shadow economy; analysis of indicators of financial and economic activity; assessment of the shadow economy in the field of agriculture; financial losses; financial and economic activity; financial stability

For citation: Avdiyskiy V.I. Improvement of methods for assessing the shadow economy in agricultural enterprises for the purpose of preventing threats to food security. *Finance: Theory and Practice*. 2025;29(2):47-58. DOI: 10.26794/2587-5671-2025-29-2-47-58

INTRODUCTION

Practice shows that today, in the context of Russia's political and economic isolation, the agricultural sector of the national economy is becoming one of the main drivers of growth for the Russian economy, which is intended to ensure a stable supply of food products to the population [1].

According to Rosstat's data for 2022, due to the record grain harvest and increased export volumes, agricultural growth amounted to 6.7%.¹ The reorientation of agricultural production towards domestic consumption markets and the expansion of food exports allows Russia not only to overcome sanctions pressure but also to ensure food security at all levels and national security of the state as a whole. Considering the particular importance of this sector of the national economy, the state today faces the task of not only ensuring the stable development of this direction but also preventing the growth of informal, unaccounted agricultural production, which has a destabilizing effect on the state of food security in the country [2].

Over the past few decades, the scientific theory of economic security has significantly developed, becoming one of the most important scientific directions both at the international and national levels and one of the main priorities of any state. Without delving into the historical aspects of the formation and development of this scientific direction, it should be noted that economic security as an economic phenomenon emerged during the early days of statehood. It was aimed not only at helping society understand the level of its economic potential and its protection but also at assessing negative processes that have a destabilizing impact on the socio-economic development of the state [3].

In the current conditions of increasing political and economic isolation and military-

political pressure on Russia, the country's economic security is becoming a leading factor in ensuring its stable socio-economic development [4].

In accordance with the Decree of the President of the Russian Federation in 2017, the "Strategy for Economic Security of the Russian Federation until 2030"² was approved, which outlines the main challenges and threats to economic security. The nineteenth point in this list identifies the "retention of a significant share of the shadow economy" as a threat. It is also worth noting the point "high level of criminalization and corruption in the economic sphere". As we can see, these threats have been elevated to the state level and require fundamental research to develop a scientifically grounded strategy for minimizing the risks of their manifestation.

MATERIALS AND METHODS OF RESEARCH

Informal activities that are fully or partially exempt from fiscal control are commonly referred to as the "shadow economy" (underground economy, black economy). During the Soviet period of Russian history, this term began to be actively used in connection with the ongoing struggle against "guards" (workers in underground production). In the late 1960s, using, as a rule, raw materials stolen from the state, they launched various types of unregistered underground production, mainly of consumer goods, thereby substituting the state in meeting the growing needs of citizens and obtaining unaccounted income from this activity. During this same period, the first scientific (mainly in departmental, law enforcement research institutes) criminological and legal studies appeared, focusing on the investigation of the causes and conditions of the emergence of the

¹ Rosstat presents the second estimate of GDP for 2022. URL: <https://journal.open-broker.ru/research/rosstat-dal-pervuyu-ocenku-vvp/> (accessed on 23.04.2024).

² Decree of the President of the Russian Federation from 13 May 2017, No. 208 "On the Strategy for Economic Security of the Russian Federation for the Period up to 2030". URL: <https://www.garant.ru/products/ipo/prime/doc/71572608/> (accessed on 22.04.2024).

shadow economy, as well as the development of methods for identifying and documenting facts of illegal, underground production. The most active research on the shadow economy began to develop with the emergence of a new scientific field — “economic security”, which arose under the influence of institutionalism within the frameworks of economic and sociological theories. Among Russian scholars, it is worth noting the works of V.I. Avdiyskiy et al. [5, 10], Yu.V. Truntsevsky [6, 10], M.A. Bulgakova and P.V. Samolysov [7], V.M. Bezdenezhnykh [10] and others.

According to the authors, **the shadow economy is a complex socio-economic phenomenon that permeates all spheres of social relations, manifested in the deliberate (intentional) activities of economic entities to withdraw the results of their financial and economic activities from fiscal or other forms of state control and accounting, regardless of ownership forms and their capitalization levels, with the aim of obtaining unaccounted income.**

At the same time, the removal of certain sectors of production and various types of services, including in the agricultural sector, from fiscal control is nothing more than a peculiar illegal form of protection of entrepreneurs' own economic interests, which, due to certain socio-economic, political, national, and regional characteristics, often oppose public interests.

A clear example of the flourishing shadow economy in the agricultural sector (according to “FederalPress”) can be seen in the widespread criminal schemes for purchasing raw materials from producers without VAT through intermediary companies, followed by the resale of this product through a chain of shell companies with the issuance of corresponding fictitious documents. The aim of such a scheme is to avoid paying VAT. The deal is concluded through a real export company, which legally claims VAT reimbursement from the state. According to expert estimates, as a result of these criminal

schemes, the state lost up to 80% of the money from such transactions. According to the Federal Tax Service (FTS), the annual losses to the state in the grain and sunflower market reached up to 65 billion rubles in the export market and up to 100 billion rubles in the domestic market.

In the fight against such criminal schemes, law enforcement agencies have inspected almost all major agricultural producers in the country: the enterprises of the “Rusagro”, “Cherkizovo”, “Chelyabinsk Poultry Factory”, “Bogdanovich Compound Feed Plant”, “Nastyusha” Group of Companies, Magnitogorsk Poultry Factory, and several others. The result of the large-scale inspection of agro-industrial complex enterprises was the signing in 2017 of the agricultural charter in the field of agricultural product turnover. According to this document, which has been signed by about 4 000 companies to date, agricultural producers have committed not to use such criminal schemes in their activities.

Stable, sustainable food supply for the population of Russia is a priority task for the agricultural sector of the economy, which represents a complex interconnected, deeply integrated system [8–12].

The agro-industrial complex consists of three main sectors:

- industry for the production of means of production;
- agriculture;
- food and processing industry.

At the same time, it should be noted that the level of interaction between these spheres depends not only on the state of economic security in the agricultural sector but also on ensuring a high level of its competitiveness, the ability to withstand modern challenges and threats, including ensuring food security at all levels of the Russian state.

Moreover, practice shows that to ensure the stable functioning of the agro-industrial complex, a number of other subsystems are involved, covering a wide range of national issues — investments, labor resources, raw

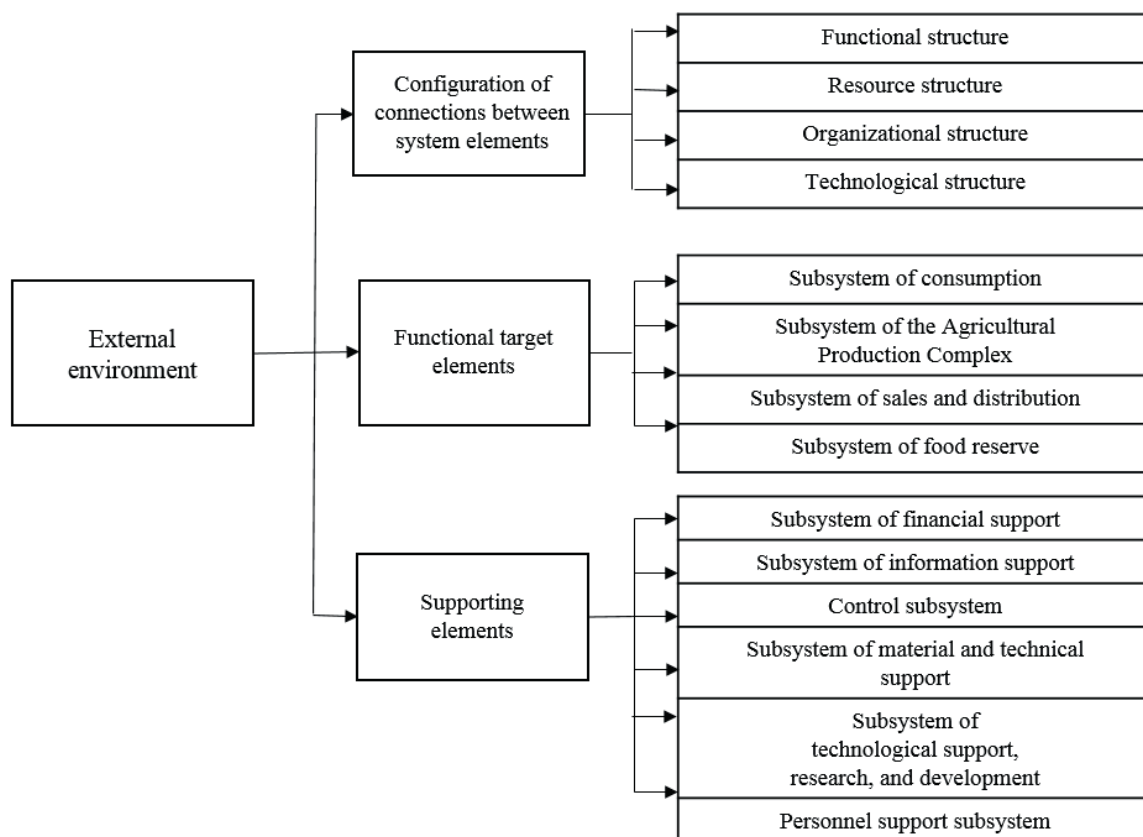


Fig. 1. The Food Security System of the State

Source: Compiled from the materials [10, p. 87].

materials, energy supply, consumption, and others.

The complex of main subsystems shown in Fig. 1 was developed under the guidance of one of the authors of the article [10].

Analysis of the data from the Russian statistical yearbook of the Federal State Statistics Service over the past few years shows that it presents the main indicators of the performance of the agricultural sector of the economy, including in terms of the designated subsystems. However, this statistical yearbook does not contain statistical indicators of the level of the shadow economy, not only for Russia as a whole but also for this sector of the national economy. At the same time, conducted research shows that a quantitative and qualitative analysis of the main indicators of the subsystems allows for an objective assessment of the real state of the agricultural sector of the economy, its

share in the overall structure of agricultural production, and the determination of the effectiveness of its development, as well as the presence or absence of signs of unaccounted – shadow production.

The methods for calculating the scale of shadow activities vary. Many experts include not only tax-hidden income in their calculations, as researchers from the World Bank, Rosstat, and the Ministry of Finance of the Russian Federation do, but also all other undeclared cash flows, including bribes and funds earned from the production of counterfeit goods, etc. Thus, based on the analysis of the activities of an economic entity, it can be concluded that the understanding of the shadow economy is largely determined by the choice of the main criteria for classifying economic relations to the shadow sector, including in the agro-industrial complex.

Thus, according to the data from the International Monetary Fund (IMF), today the size of the shadow economy in Russia has reached 38% of GDP, which is 136 trillion rubles. However, it is impossible to determine on what basis such conclusions were made, how objective they are, and whether they correspond to reality. An analysis of the statistical reporting of the Russian Federation also shows that it is quite difficult to give an objective assessment of the level of the shadow economy today, as it is exclusively latent in nature and tries to avoid any assessment (this fact is confirmed by the differing figures in the reports of various government agencies and experts). At the same time, it should be noted that all data available in open sources is presented exclusively within the range of 2018–2020. And, as mentioned above, there is no such data at all in the Russian statistical yearbook of Rosstat for 2022.³ In open sources, it is indicated: according to Rosstat, in 2018, the non-observed economy of Russia accounted for 11.6% (including the shadow economy for the purpose of tax evasion — 4% of GDP). Unfortunately, today in Russia, it is very difficult to analyze and provide an objective assessment of the level of the shadow economy as a whole across the country and in individual sectors of the national economy, including the size of hidden money from tax control. According to media reports, last year the volume of Russia's shadow economy was about 20% of the country's GDP (over 20 trillion rubles). Rosfinmonitoring noted that this indicator was over 25%. The provided statistical data clearly show that there is no unified standard for calculating the volumes of the shadow economy in Russia, including for individual sectors of the national economy, taking into account their sectoral specifics.

At the same time, a number of experts note that as a result of the economic crisis

of 2020 in Russia, due to insufficient support for small and medium-sized businesses, many entrepreneurs, including those in the agricultural sector, were forced to go «underground» to avoid paying taxes, and this significantly affected the GDP level. According to internet sources, this “...will most likely lead to a sharp increase in the shadow economy in 2021–2023 (especially in relation to the reduced GDP), and positive dynamics will only be restored by 2025”.⁴ To support these conclusions, one should refer to the work of scholars R.I. Nigmatulin and B.I. Nigmatulin, who note that in 2021 in Russia, “the value of goods and services as a share of GDP produced by small and medium-sized enterprises was the lowest, amounting to only 20%, which is 2.4 times less than in the USA (48%) and 3.0 times less than in China” [13].

The shadow economy in the agro-industrial complex (AIC) not only poses a significant threat to economic growth and the well-being of the population but also negatively impacts the food security of our state. Based on the results of the conducted research, the author concluded that among the traditional factors influencing the formation of the shadow economy in the agro-industrial sector are:

- destructive, antisocial behavior of a person, ineffective management of economic processes to ensure a high level of production relations in the interests of all citizens of the country;
- the presence of uncontrolled circulation of goods, through which their secondary redistribution is carried out;
- the presence of a discrepancy between the consumer and exchange value of goods;
- the lack of sufficient working capital for agro-industrial enterprises, as well as a stable financial market, which is particularly relevant due to the significant impact of seasonality on agricultural production;

³ Russian Statistical Yearbook. 2022: Statistical Collection. Rosstat. Moscow, 2022. 117, 322, 398 pp. (accessed on 23.04.2024).

⁴ The shadow economy in Russia. URL: <https://rusind.ru/tenevaya-ekonomika-v-rossii.html> (accessed on 23.04.2024).

- the presence of a criminal environment that compels the production of unaccounted agricultural products;
- an ineffective and illegitimate tax system that is not aimed at ensuring the development of agricultural production or the formation of a conscientious taxpayer.

The factors mentioned cannot be considered exhaustive. Taking into account the industry-specific nature of agricultural activities, as well as regional characteristics, there may be other reasons for the organization of unaccounted agricultural production.

RESULTS

The presence of the shadow economy in the agricultural sector can be viewed from various aspects. On the one hand, informal production meets the demand for food and creates a certain number of jobs, but at the same time, as practice shows, it serves as a basis for the formation of a criminal environment and as a foundation for the exploitation of informal workers who receive no social or legal guarantees. Moreover, by using shadow employment, many companies obtain additional unaccounted income by evading the payment of various social taxes and contributions stipulated by current legislation. Shadow employment, including in the agro-industrial complex (AIC), leads not only to the distortion of the labor market but also to its degradation in Russia as a whole, including significant losses for budgets at all levels, which are compensated by conscientious taxpayers. The conducted analysis shows that the presence of unaccounted employment in the AIC sector is one of the serious threats to ensuring food security at the federal and regional levels. The presence of these negative manifestations, along with the lack of an objective assessment of their scale, does not allow for a clear determination of the threshold values for ensuring food security at the federal and regional levels, including for certain socially significant food

products [14–16]. This negatively affects the minimization of risks in the development of targeted state programs for the country's economic development, which should ensure food security for the population (i.e., the availability, accessibility, use, and assimilation of food), and create conditions for investing in agricultural production to ensure the stable functioning of the industry. In this regard, the question of an objective analysis of methods for assessing the level of the shadow economy in the AIC, and primarily at the micro level (enterprise, organization, household, family, individual), becomes quite relevant.

One of the most problematic aspects of studying the shadow economy, as already noted above, is the development of a methodology for assessing key indicators that indicate the concealment of shadow agricultural production from accounting and control. Such indicators and characteristics must be taken into account to establish the signs of the presence and volumes of agricultural products removed from fiscal control. There is a certain classification for measuring the shadow economy:

- 1) according to the source of information:
 - direct (surveys, tax audits);
 - indirect (monetary, balance sheet, employment indicator);
- 2) by the scope of research units:
 - macro methods;
 - micro methods;
- 3) by the nature of the materials studied:
 - integral;
 - differential.

However, direct and indirect methods have become the most widespread. The former are based on surveys and observations; the latter rely on the analysis of statistical data and indicators provided by financial government bodies and tax services.

Taking into account the specifics of agricultural production, it seems reasonable to use micro-methods for the objective measurement of the shadow economy level in agricultural enterprises (at the micro level),

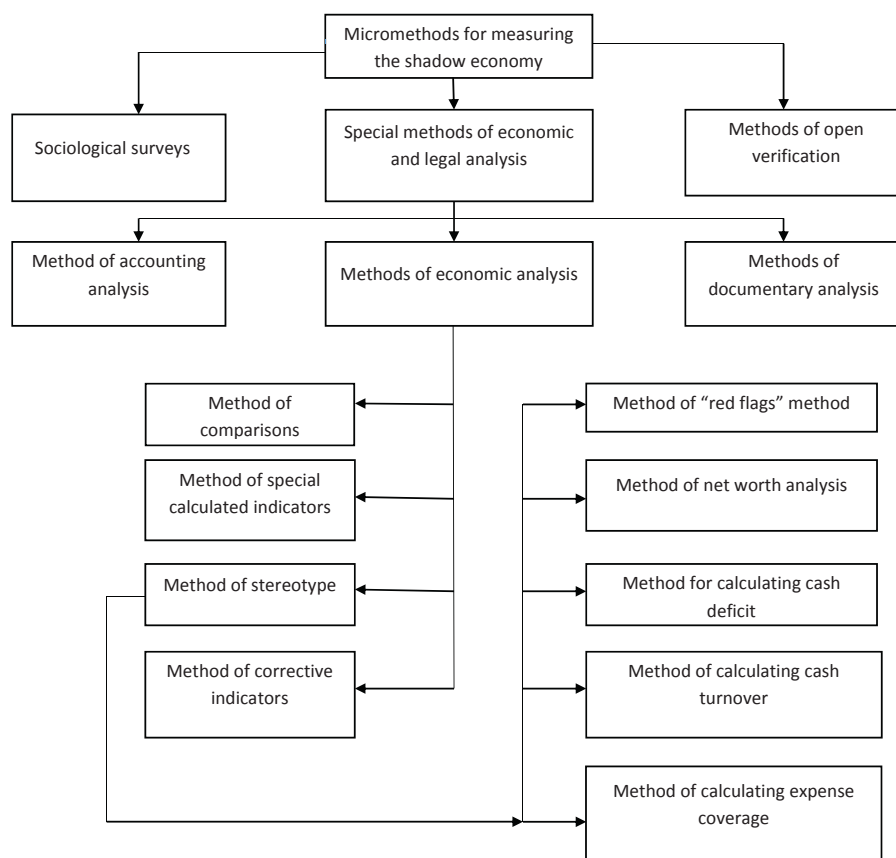


Fig. 2. Micrometers for Measuring the Shadow Economy of Agricultural Enterprises

Source: Author's development.

which, in the author's opinion, allow for capturing and calculating the actual volumes of produced goods at the main stages of production activities in this field.

Currently, there is a positive practice of using three direct micro methods of analysis, which are presented in Fig. 2.

Sociological surveys — through this method, information is collected by surveying the following categories of citizens (respondents):

1. Individuals who are directly engaged in illegal (shadow) activities or involved in them understand this and consciously participate in it. At the same time, they condemn this type of illegal activity, are ready to assist in exposing all participants in illegal agricultural production, and reveal the true scale of unaccounted agricultural production.

2. Individuals who are directly involved in the production of unaccounted (shadow)

agricultural products, i.e., those who possess insider knowledge, but do not intend to disclose their participation in this illegal activity.

3. Individuals who possess information about facts indicating the presence of signs of unaccounted agricultural production, but deliberately treat this information passively or simply do not respond to it.

4. Individuals who were not only witnesses to the shadow economy but also genuinely suffered from this activity, including from the organizers of unregistered agricultural production, their patrons, criminal structures, etc.

The information obtained from all four categories of respondents is necessary and of great importance when conducting research on an agricultural enterprise to form its characterization. In this case, to assess the quality and level of reliability of the obtained information, preference should be given to

individuals (respondents) who are directly engaged in illegal (shadow) activities or are involved in them, as well as those who are directly involved in the production of unaccounted (shadow) agricultural products, i.e., those who possess reliable information about the real state of affairs at the facility from the inside. To form an objective characterization of the research object, it is necessary to carefully develop the questions to be asked to the respondents, taking into account the industry specifics of the agricultural producer and regional features.

The questions should take into account the organizational and legal form of the agricultural producer (legal entity or individual), the level of capitalization (large company, small or medium business), farm, individual entrepreneur, etc. The questions should be formulated in such a way that the respondent cannot determine the real purpose and direction of the survey. And most importantly, it is necessary to eliminate the possibility of providing false information, hiding the fact of their participation in the production of unaccounted agricultural products, or the respondent having such information.

Analysis of foreign experience in collecting statistical data to identify signs of the shadow economy shows that in many countries, the household survey method is widely used to determine the volumes of labor resources and actual working hours in production. The application of this method guarantees the disclosure of illegal economic activities only to the extent that it allows for the identification of the subject being examined.

The method of open inspection — the application of this method falls within the competence of specially created bodies that monitor the activities of agricultural producers, which are tasked with identifying and preventing violations of currency, customs, banking, tax, antitrust legislation, trade rules, fire safety, sanitary norms, and

so on, as part of their functional duties. Practice shows that the aforementioned and other economically oriented offenses are generally the result of organizing informal, unaccounted production activities. Moreover, when these violations are identified, factors indicating the presence of signs of the shadow economy are often revealed, which may serve as a basis for conducting a more in-depth inspection of the agricultural producer's activities using the method of economic and legal analysis.

The special method of economic and legal analysis consists of three main components:

- accounting analysis;
- documentary analysis;
- economic analysis.

The application of this method, using all three components in a comprehensive manner, allows for the confirmation (recording) of the existence of unaccounted agricultural production, as well as the calculation (assessment) of the actual volumes of shadow production.

Thus, through accounting analysis, the examination of primary documents reflecting the results of the financial and economic activities of agricultural producers is carried out, including the balance sheet, synthetic accounts, calculations, and other primary accounting documents to identify any discrepancies in accounting data, as well as deviations in production activities. In practice, accounting analysis is widely used to identify and document instances of tax evasion, intentional distortion of accounting entries to conceal taxable objects, understatement of the tax base, etc.

The main objective of document analysis is to examine all documents that reflect information about the results of the financial and economic activities of agricultural producers, in order to establish their authenticity and compliance with legally established requirements (i.e., the presence of required details). It is also determined

whether the information displayed in the documents corresponds to their status and how comprehensive it is, etc.

Economic analysis (microeconomic) of agricultural production enterprises represents an analysis of all their production and economic activities, which will be the subject of the study. Through the economic analysis of specific economic indicators of the agricultural enterprise, it is possible to most fully and objectively investigate not only all economic and production business processes, development trends of the entire enterprise, identify both positive and negative phenomena that have a destabilizing impact on its economic security, but also accurately establish the fact of the presence or absence of illegal agricultural production, the main causes and conditions contributing to its manifestation.

To conduct a qualitative economic analysis of the activities of an agricultural enterprise, it is necessary to consider:

1. Comparison of indicators;
2. Special calculation indicators;
3. Stereotypes;
4. Corrective indicators.

1. Comparing the performance indicators of an enterprise is one of the effective forms of research aimed at identifying reserves that can be used for organizing informal agricultural production, which allows for calculating the volumes of products that are off the fiscal record, etc. Comparability can only be achieved by comparing qualitatively homogeneous indicators. For example, comparing industry-wide and regional yield indicators with those recorded in the reports of a specific agricultural producer makes it possible to calculate the actual amount of produced products that are off the record. When comparing approved consumption norms, such as fuel, electricity, water, and other raw materials, it also makes it possible to determine the presence of shadow agricultural production and calculate its volume.

2. Special calculation indicators. Practice shows that the method of special calculations is widely used to identify facts of tax evasion, income concealment, the presence of a shadow economy, money laundering of proceeds obtained through criminal activities, and other economic offenses. The main focus of these calculations is to obtain analytical indicators that can clearly indicate the presence of discrepancies (gaps) between the actual financial condition of the agricultural producer, recorded in their reporting indicators, and the current benchmark values for this category of enterprises. Typically, data on production turnover, balance and net profit, the number of employees, labor productivity, and others are used to obtain a special calculation indicator. Thus, the obtained value of this indicator may indicate the absence or presence of signs of illegal economic activities that require further detailed investigation.

3. Stereotypes. In the field of agricultural production, stereotypes represent meaningful stable patterns of production and economic processes, as well as human behavior in the production of agricultural products. This allows for determining whether an agricultural enterprise corresponds to a certain stereotype (positive or negative, with or without unaccounted agricultural production) through the assessment of its compliance with existing economic norms, regulatory acts governing the activities of agricultural producers, and protecting the interests of entities involved in agricultural production.

For the effective application of the stereotype method in practice, the following are used:

- method of “red flags”. The essence of the method lies in developing a special system that ensures the analysis of a large volume of information about the results of the financial and economic activities of an agricultural enterprise, transforming them into concrete facts that cannot be ignored, as this information contains data on signs of offenses committed by the enterprise’s employee.

“Red flags” are usually set for those financial and economic operations and production areas that require increased attention from regulatory bodies and the management of the agricultural enterprise;

- method of net worth analysis. The calculation of net worth is a complex economic component through which the total value of a product is considered, minus tax payments to the consolidated budgets at all levels and other additional costs associated with the production of agricultural products (purchase of raw materials, wages, electricity, fuel and lubricants, etc.). This method allows for the establishment of the fact of production and sale of unaccounted agricultural products. A comparative analysis of the declared income from agricultural production with the increase in the wealth of the agricultural producer over a certain period (acquisition of expensive real estate, other assets, etc.) may indicate that the value of the newly acquired property does not correspond to the declared income and, therefore, may serve as evidence of the sale of agricultural products that have been removed from fiscal control;

- method of calculating cash deficit. The application of this method in agricultural production is ineffective, as, generally, unaccounted agricultural products obtained as a result of production activities and removed from fiscal control (for example, unaccounted sown areas) are sold for cash without being recorded in the cash book. Often, in order to avoid inspection checks, farmers sell unaccounted agricultural products for cash in bulk to resellers, whose activities contribute to the development of the shadow economy in agricultural production.

- method of calculating cash turnover and the method of calculating expense coverage are essentially similar and are based on the comparison of indicators. However, due to industry specifics, their application in the study of agricultural producers is not very effective.

4. Corrective indicators. This method is an integral part (element) of the system of methods used for conducting an economic and legal analysis of agricultural producers' activities to identify instances of production (shadow economy) of unaccounted agricultural products. It is based on a comparative analysis of the economic indicators of the results of agricultural enterprises' activities with indicators characterizing the state of the external environment in which they operate. For example, by comparing economic indicators for the costs of conducting agricultural work that do not correspond to the season in which they are carried out, it may indicate the writing off of these costs for work that was not performed with the aim of deliberately underreporting the taxable base and evading taxes. Similar operations related to unjustified cost write-offs can be conducted for the purpose of embezzling material assets — consumables (fuel and lubricants, raw materials, etc.). Through the analysis of corrective indicators, it is easy to establish facts of fictitious registration (“dead souls”) of seasonal workers for the purpose of underreporting the taxable base, embezzling funds from the payroll fund, etc. [17–20].

CONCLUSION

The conducted research shows that with the increasing complexity of production and economic ties, the process of assessing the shadow economy and identifying signs of informal production becomes significantly more complicated. Over the past decades, with the development of information technologies, not only has there been an increase in the level of the fight against the shadow economy and timely identification of signs of informal activities in agricultural enterprises, but also the active use of information technologies to evade fiscal control over significant volumes of production activities for the purpose of obtaining unaccounted profits and laundering proceeds obtained through criminal activities. To eliminate these negative phenomena, it is

necessary to develop a comprehensive state program to address the main causes and conditions contributing to the formation of the shadow economy, thereby ensuring food security and national security of the country as a whole.

REFERENCES

1. Vorontsova E.V., Vorontsov A.L. Ensuring the quality and safety of food as a task of the Russian state in the field of ensuring food security. *Gosudarstvennaya sluzhba i kadry*. 2021;(5):31–33. (In Russ.). DOI: 10.24411/2312–0444–2021–5–31–33
2. Avdiiskii V.I. Ensuring food security in the context of Russia's political and economic isolation. *Ekonomika sel'skogo khozyaistva Rossii = Economics of Agriculture in Russia*. 2023;(12):52–58. (In Russ.). DOI: 10.32651/2312–52
3. Altuhov A.I. Food security in the context of implementation of the new edition of its doctrine. *Vestnik Kurskoi gosudarstvennoi sel'skokhozyaistvennoi akademii = Bulletin of the Kursk State Agricultural Academy*. 2020;(9):82–90. (In Russ.).
4. Kapustina N.V., Tishchenko E.S., Ruzhanskaya N.V., et al. Comparative analysis of the economic security of the regions and the methodology of its implementation. In: Popkova E.G., Sergi B.S., eds. *Sustainable agriculture: Circular to reconstructive*. Singapore: Springer-Verlag; 2022:243–254. (Environmental Footprints and Eco-design of Products and Processes). DOI: 10.1007/978–981–19–1125–5_28
5. Avdiiskii V.I., Dadalko V.A., Sinyavskii N.G. Shadow economy and economic security of the state. Moscow: INFRA-M; 2019. 538 p. (In Russ.).
6. Truntsevskii Yu.V. Shadow economy and criminal business. Moscow: KnoRus; 2021. 492 p. (In Russ.).
7. Bulgakova M.A., Samolysov P.V. Food sector's evolution and food security: A theoretical aspect. *Zhurnal predprinimatel'skogo i korporativnogo prava = Journal of Entrepreneurship and Corporate Law*. 2019;(4):18–23. (In Russ.).
8. Ushachev I.G., Kolesnikov A.V. Scientific approaches to assessing food security and food independence of the Russian Federation. *APK: ekonomika, upravlenie = Agro-Industrial Complex: Economics, Management*. 2022;(3):3–18. (In Russ.). DOI: 10.33305/223–3
9. Zolotareva S.V., Tainov S.S. Improving the management system of economic accessibility of food products. *Vestnik Toraigrov universiteta. Ekonomicheskaya seriya = Bulletin of Toraigrov University. Economic Series*. 2023;(3):50–65. (In Russ.). DOI: 10.48081/QVMJ9839
10. Avdiiskii V.I., Bezdenzhnykh V.M., Truntsevskii Yu.V., et al. Unified state standards for ensuring the economic security of economic entities of the Russian Federation. St. Petersburg: Sovetnik; 2014. 160 p. (In Russ.).
11. Kovzunova E.S. Food systems and food security: structural elements of provision and factors determining them. *Ekonomika i predprinimatel'stvo = Journal of Economy and Entrepreneurship*. 2023;(3):1416–1422. (In Russ.). DOI: 10.34925/EIP.2023.152.3.286
12. Shelkovnikov S.A., Obukhov A.A., Obukhova E.A. Research of scientific issues of food supply and food security. *Vestnik Akademii znaniy = Bulletin of the Academy of Knowledge*. 2023;(6):438–443. (In Russ.).
13. Nigmatulin R.I., Nigmatulin B.I. Macroeconomic and demographic indicators of Russia in the period 1970(1980)–2022 in comparison with Poland, new and old EU countries. How we fell behind. Moscow: Litterra; 2023. 248 p. (In Russ.).
14. Akimova E.S. Food security indicators from the position of ensuring the economic security of the personality. *E-Scio*. 2019;(6):649–656. (In Russ.).
15. Solodova S.V., Beskorovainaya N.N., Karabintseva S.A. Organization of accounting of costs associated with quality control of food products as a factor of food security. *Upravlencheskii uchet = The Management Accounting Journal*. 2023;(5):203–208. (In Russ.). DOI: 10.25806/uu52023203–208
16. Dadalko V.A., Tyukina U.E. The impact of the informal sector of the economy on the national security of Russia. *Natsional'nye interesy: priority i bezopasnost' = National Interests: Priorities and Security*. 2019;15(3):521–532. (In Russ.). DOI: 10.24891/ni.15.3.521

17. Melnikov A. B., Yavrumyan I. V. Improving the quality of food supply of the population on the basis of the growth of its income. *Estestvenno-gumanitarnye issledovaniya = Natural Humanitarian Studies*. 2022;(39):192–198. (In Russ.). DOI: 10.24412/2309–4788–2022–1–39–192–198
18. Loginov D., Karanina E. V., Palkina M. V. Financial indicators of economic security of the region. In: Popkova E., ed. *Growth poles of the global economy: Emergence, changes and future perspectives*. Cham: Springer-Verlag; 2020:795–801. (Lecture Notes in Networks and Systems. Vol. 73). DOI: 10.1007/978–3–030–15160–7_80
19. Karanina E. V., Selivanova M. A., Skudnova I. A. Diagnostics of economic security risks as a manifestation of management quality in the global financial markets: Factors, threats, criteria and indicators of industrial and manufacturing engineering. *International Journal for Quality Research*. 2021;15(3):941–960. DOI: 10.24874/IJQR 15.03–16
20. Getmanova S. O., Logvinova I. V. The shadow economy and its impact on economic security. *Aktual'nye issledovaniya = Current Research*. 2020;(2):40–44. (In Russ.).

ABOUT THE AUTHOR



Vladimir I. Avdiyskiy — Dr. Sci. (Law), Prof., Department of Economic Security and Risk Management, Faculty of Economics and Business, Financial University, Moscow, Russia
<https://orcid.org/0000-0002-6685-3589>
vavdiyskiy@fa.ru

Conflicts of Interest Statement: The author has no conflicts of interest to declare.

The article was submitted on 23.04.2024; revised on 23.05.2024 and accepted for publication on 27.05.2024.

The author read and approved the final version of the manuscript.